

John W. D.

A
T R E A T I S E
ON THE
K I N K C O U G H.

WITH AN
A P P E N D I X,
Containing an Account of HEMLOCK,
and its PREPARATIONS.

By WILLIAM BUTTER, M. D.
Fellow of the Royal College of Physicians, EDINBURGH.

Non fingendum aut excogitandum, sed inveniendum quid
natura faciat, aut ferat. BACON.

L O N D O N:
Printed for T. CADELL, in the Strand.
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10

THE
ON THE
KINK COUGH.
WITH AN
APPENDIX.

PRESENTED BY
MUSEUM
L. F. B.
ANTHROPOLOGICAL
LADY BANKS.
BY WILLIAM L. F. B.
Fellow of the Royal College of Physicians, &c.

Non Regulae et Ordine, sed inveniuntur
Natura recte et bene.

LONDON:
Printed for T. Cadell, in the Strand.
MDCCCXXXIII.

TO
THE MOST NOBLE
C H A R L E S
DUKE OF QUEENSBURY,
&c. &c. &c.

THE FOLLOWING PAGES
ARE INSCRIBED
WITH THE GREATEST RESPECT
BY HIS GRACE'S
MOST OBEDIENT, AND
MOST HUMBLE SERVANT,
WILLIAM BUTTER.

TO
THE MOST NOBLE
CHARLES
DUKE OF QUEENSBURY

Sec. Sec.

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publick a method of cure for it, con-

P R E F A C E.

been again and again published with the
same view before; and eked out with a

WHILST I was endeavouring to
find out a successful method of
cure for the kinkcough, I employed the
same opportunities to improve the de-
scription of the disease. Having thus
collected a number of facts, I next con-
sidered it as no unprofitable labour to in-
quire into its nature, seat, and several
causes. I was the more inclined to fill
up this plan, as it is a general complaint
that too little notice hath been taken of
the kinkcough in the history of diseases.

This however is what an eminent phy-
sician, if I understand him aright, calls
by way of reprehension "building sys-
tems."† Be that as it may, he would
have been better employed in perfecting
the description, and elucidating the nature

of

† See Lond. Medical Observations, art. 90.

of the kinkcough, than in giving to the publick a method of cure for it, consisting only of a medicine which had been again and again published with the same view before; and eked out with a few observations as trifling as unworthy of him.

But though the method of cure laid down in the following treatise hath a fair claim to novelty; yet I desire no share of the publick favour, unless it shall be found as successful as it is new: for I am conscious that a mere innovator, especially in the practice of physick, is not only an insignificant, but a very reprehensible character.

It hath always been found a difficult matter to do justice to the experiments of others: the neglect of a circumstance seemingly trifling, or a supposed improvement on the process, hath often rendered a very important fact disputable, and cast a slur upon the veracity of the author.

In justice therefore to myself I think it proper to declare, that I will not be
answerable

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answerable for the success of any experiment that may be repeated after me; unless it be performed exactly according to the method which I have described, and also with the very preparation of hemlock which I have always used: for this and other reasons, I have added an account of hemlock and its preparations, as a necessary supplement to my discourse on the kinkcough.

If these endeavours, for the improvement of my profession, meet with a favourable reception, I shall soon give to the publick the whole of my experience with regard to hemlock as a medicine.

In the mean time, as that experienced physician, my friend Doctor Eliot hath favoured me with a valuable communication on this subject, I insert it here in his own words.

“The violence of coughs, unattended with inflammation, is abated, by the use of the hemlock, after opiates have, with every precaution, been given to no purpose; and after all other helps have been tryed in vain.

Physicians,

Physicians, who have seen many consumptive cases, must know, how seldom those are cured, who spit up aches-coloured matter; where there is but a slight degree of inflammation attending that appearance, the consistence of the matter is sooner mended, and the strength of the patient restored by the use of the hemlock, than by that of any other medicine.

In two cases of a confirmed marasmus, unaccompanied with fever, where the patients had become absolute skeletons and were reduced to the greatest degree of weakness, a compleat cure was obtained by the hemlock, after asses milk, with every other help, had been tried ineffectually for the one; and the living upon womens milk with the advantage of the patients sucking it herself, from the breasts of two healthy nurses, had been tried for the other, without any benefit.


In this last, besides taking the Extract of the hemlock, the belly was twice a day

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day fomented with a strong decoction of the herb.

I have given the hemlock in several cases of the same kind, without any good effect, but I never saw any hurt from the use of it, except where there were considerable marks of inflammation."



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tion."

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A T R E A

CHAPTER I.

§ 1. *The Synonymes.*

c. 5. Huxham de aere ad ann. 1732.

Nofolog. Method. Cl. V. Ord. I. gen. v.

sp. 17. Willis. Morb. convuls. c. 12.

Ejusd. Pharm. Rat. P. II. Sect. I. c. 6.

Sydenh. lib. cit. passim. Ejusd. Proc,

B

integr.

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~~integr.~~ Burnet. Thesaur. Med. L. xvii.

Sect. xx. § 4. Harris de morbis acutis
infantum passim. Hoffman iii. p. iii.
C. Morton. Dissert. b. Theod. Forbes.
Dissert. inaug. Home Princip. Med.
p. 121.

Tussis ferina. Sauvages. 1. c. sp. 10.

Hoffman. 1. c.

—stomachalis. J. J. Waldschmidt. Prax.
Med. cas. 23.

— quinta vel quintana. Ballon. Epid.
et Ephem. L. II.

Architoux des enfans. Hecquet de la
medecine des pauvres. Tom. ii. p.
306.

Coqueluche. Lieutaudt. Precis de la mede-
cine, p. 685. Brouzet. Essai sur l'edu-
cation.

Kinkeough. Edinb. Medical Essays. Bis-
set's Medical Essays, XV.

Chincough or hooping cough. Burton's
Nonnaturals, p. 345. Allen's Synops.
§. 1533. Millar's Observations on the

Asthma, &c. Hillary's diseases of Bar-
badoes. Edit. 2. p. 45. Armstrong's
diseases

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diseases of infants. Edit. 2. p. 101.
Morris. Lond. Medical Observations,
iii. art. 27. Fothergill, *ibid.* art. 30.

§ 2. *The Definition.*

The kinkcough may be defined a quick and numerous succession of violent short coughs, followed by a long, strait, and generally shrill inspiration; which coughs and inspiration are repeated without intermission for many seconds, or even some minutes, and often terminate in vomiting of phlegm.

I have said that the kinkcough is generally attended with a shrill inspiration; because it sometimes occurs without that symptom. Such a defect constitutes a variety of the disease, which may properly be denominated, *The imperfect Kinkcough.*

§ 3. *The Description.*

The kinkcough begins like a common cold, affecting the patient with lassitude, head-ach, tenderness and wateriness of

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the eyes, sneezing and running at the nose, hoarseness, sore throat, a short dry cough, thirst, loss of appetite, &c. After these symptoms have continued for a few days, a week, a fortnight, and sometimes three weeks, the kinks, or whooping fits, oppressed respiration, and feverishness, come on; even sometimes after it hath been thought that the child was recovering from what was taken to be a common cold: and there have been instances where whooping was one of the first symptoms. Sometimes the patient is feverish from the beginning of his illness; commonly the symptoms of fever begin at the same time with the whooping, but often the child is free from fever during the whole progress of the disorder. Though the appetite is bad at first, yet in the course of the disease it is unusually craving; especially when the patient vomits often. Generally the patient hath a bloated, languid, wan appearance; his belly is costive; his urine is pale, though mostly with sediment; and his limbs are cold.

After

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After the kink comes on, it returns in fits, attacking sometimes every hour, every half hour, or oftener; and at other times, not oftener than once in two, three, or four hours. These fits are pretty exactly periodical. During the paroxysm, the face and neck are swelled and red, and often livid; the head is distracted with pain, the eye-lids are puffed up, the eyes appear as though they would start out of their sockets, the tears trickle down, the pulse is accelerated, the whole body is in agitation, and there seems to be great danger of suffocation till the expectoration or vomition of phlegm takes place; upon which, the fit either terminates immediately or soon after, to the great relief of the dyspnoea and other symptoms. But sometimes in the fit, the whole body becomes rigid, and the patient swoons, and hath a cadaverous appearance; he then gradually recovers his breath by sighs and sobs; and finally comes to himself, for the most part, by sickness and vomition.

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The discharge in this disease, though generally of a slimy consistence, is sometimes thin and watery.

A discharge of blood from the eyes, nose, lungs, or stomach, relieves the fit. Sometimes the urine and stool pass off involuntarily, with the like good effect. The fits are commonly worst in the night. In bad cases the fits are severe in proportion to the intervals between them. The fit is very apt to come on immediately after a full meal, or upon drinking any thing cold, or upon going into the cold air, or upon quick motion, or upon any remarkable agitation of the spirits. Vomiting most commonly succeeds a fit when the stomach is full. Infants that cannot spit off, and therefore must swallow what they expectorate, are more subject to vomiting than children more advanced.

The patient is commonly forewarned of the approach of voluntary paroxysms by some particular symptom: sometimes by head-ach, sometimes by pain in the breast;

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breast; at other times, by a thrilling sensation, as if a subtile vapour was ascending from the feet to the breast; but most commonly by a particular tickling or creeping sensation, either at the pit of the stomach, or within the breast, or at the top of the windpipe. These symptoms generally last some minutes, often above a quarter of an hour, and sometimes for hours together before the fit comes on. Children of all ages, while thus forewarned, obstinately refuse both meat and drink, and otherwise strive to keep off the paroxysm.

A child not three months old, has been observed, on the immediate approach of the fit, to shrink as if terrified, to clap a hand on each temple, and to press its head against its mother's bosom. Children that can walk endeavour, under the same terrifying apprehension, to catch hold of the nearest firm support, or cry to some by-stander to catch hold of them: which instinctive precaution keeps them from falling; and seems also to enable

them to go through the fit with more ease.

The natural course of the kinkcough is usually about three months: but a cough often remains for a long time after the kink is gone. And the kink is even for some time very apt to return from accidental causes; as catching cold, overloading the stomach with improper food, too great an exertion of the strength or spirits, and the like: but these relapses do not continue long.

When the disease is going off favourably, the paroxysms become gradually milder and return at larger intervals, the vomition ceases, and the expectoration, from being clear and slimy, turns white and less viscid. The limbs also recover their natural heat, the skin becomes soft and moist; and the belly, open and sometimes lax. Besides, the patient improves daily in flesh, strength, and complexion.

When the kinkcough terminates unfavourably, it is owing either to the violence of the fits, or to the length of the disorder,

The

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The patient is either suffocated, or dies convulsed in the fit.

A fatal apoplexy is sometimes the consequence.

Inflammation and suppuration of the brain have proceeded from the same cause.

We also read of palsy and loss of memory, as having arisen from violent whooping fits.

Ruptures, and a coming down of the body frequently proceed from this cause.

There have even been instances of a hump-back from those violent coughing fits.

These are the chief unfavourable terminations of this disease from the paroxysms in children.

In women the whooping fits have often produced abortion.

Finally, those fits are said, all other circumstances being equal, oftener to occasion inflammation of the lungs, and its consequences, in adults than in children.

When

When the kinkcough is protracted beyond its usual course, the flesh and strength are much exhausted; and the lungs, larynx, &c. are either ulcerated, in consequence of inflammation, and the patient dies consumptive; or at best, he becomes asthmatick, rickety, or scrofulous.

§ 4. *The Prognosticks.*

When the skin is moist, the limbs warm, the belly natural, or perhaps more open, and the patient expectorates, or vomits plentifully, there is great reason to believe that the disease will terminate favourably.

On the contrary, when the limbs are cold, or unusually hot, the skin dry, the belly costive, and the patient neither expectorates, nor vomits in the fit, a bad prognostick is formed.

Frequent hæmorrhages, though they relieve the fits, yet they generally protract the disease, and injure the habit of body.

Some

THE KINKCOUGH. 11

Some hæmorrhages are now and then of fatal tendency; as the pulmonary, by bringing on a consumption. And perhaps the apoplexy arises ofteneft in this difeafe, from an effufion of blood in the brain or within the fkuil.

The kinkcough hath often proved of the worft confequence to patients liable to the epilepsy, or other diforders of the brain.

It is alfo particularly hazardous to fuch as have weak lungs.

The kinkcough, in a constitution weakened by a preceding difeafe, hath been found always dangerous, and often fatal.

When the kinkcough is complicated with another diforder, it is, all other circumftances being equal, more hazardous than when fingle and by itfelf.

Worms generally add ftrength to the difeafe.

The dyfentery protracts the kinkcough, and renders the event very doubtful,

When

When the kinkcough is joined with the measles or small-pox, it is very dangerous.

When the kinkcough is complicated with peripneumonick symptoms, even abstracted from cutaneous eruptions, it is very dangerous; and becomes fatal from a slight error in practice.

These prognosticks, according to the common methods of cure, are uniformly just. A more successful treatment of the disease will no doubt afford several exceptions as to danger. Of these some instances will occur in the sequel of this discourse. I now proceed to inquire into the nature of the kinkcough.

CHAP. II.

Of the nature of the kinkcough.

AUTHORS are silent whether the kinkcough be the endemick of any particular country. I shall afterwards venture my sentiments on this head. Meantime we are certain, that it is an epidemick disease chiefly incident to children; and that it spreads like small-pox and measles, only amongst such as never had it before. Though it is to be met with at all seasons of the year; yet it prevails most commonly in spring and autumn. It not only precedes, or succeeds other epidemick diseases, but is often complicated with them.

Sir John Floyer hath observed the kinkcough complicated with an intermitting fever. Doctor Hoffman takes notice of its being complicated sometimes with the thrush, and sometimes with the measles. Doctor Bisset hath often seen

it

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it attend the miliary fever. Doctor Huxham's kinkcough of the year 1744, is a conjunction with pulmonary inflammation: as the amphimerina tufficulosa of Sauvages is with worm-fever. I have seen the kinkcough conjoined with the measles, with pure peripneumonick symptoms, with worm-fevers, with an ague, and with a dysentery. Every practitioner hath seen the kinkcough combined with dentition: which is not to be wondered at, since it attacks children of all ages without exception. These several complications constitute so many varieties of the kinkcough, which merit the most attentive consideration of physicians.

The kinkcough is contagious: for all pre-disposed persons more readily catch the disorder, by having free intercourse with those who labour under it. And it is certain, that it can be conveyed like other species of infection from one family to another; from town to town; and even beyond seas, by people who are themselves not subjects of the infection.

This

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This disease, however, is not quite so infectious to adults; that have escaped it in their childhood, as either small-pox or measles.

We find, that the kinkcough is both an epidemick and contagious disease. The preceding chapter, together with other well established observations, afford principles for going still farther; even so far, I hope, as to enable me to determine with certainty its true nature.

It is observable, that fever is not essential to the kinkcough; and that between the paroxysms the patient hath little or no complaint. I therefore conclude, that it is not an inflammatory disease. Whenever of course the kinkcough hath concomitant inflammatory symptoms, these must take their rise either from some peculiarity in the constitution of the patient; or from some other disease with which the kinkcough happens to be complicated; or from some error in the nonnaturals; or from some other adventitious cause.

COMO

The

The kinkcough, by its natural course, lasts some months; and returns in fits, which have generally been observed at equal distances. Much bleeding and purging have been found hurtful in this disease. Even natural hæmorrhages, though they relieve, yet have been found to protract the disorder. On the contrary, the most famed remedies are gentle vomits, stomachick laxatives, paregoricks, and stimulating antispasmodicks. Besides, the kinkcough has been suddenly carried off by a fright. Finally, dissections of such as have died early in the disease have discovered nothing preternatural.—All these circumstances considered, I do not hesitate to pronounce, that the kinkcough is a nervous spasmodick disease.

To conclude, there is an uncommon secretion of slime or mucus in the kinkcough; and the free discharge of this out of the body always mitigates the symptoms. Beside, in proportion as the quantity of slime diminishes, the fits become

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come more mild and less frequent; till at last this secretion being inconsiderable, the hooping, or spasmodick fits cease entirely, and only a slight cough remains.—A morbid irritability of the mucous glands is therefore the primary affection; and the spasms only a secondary affection in the kinkcough.

Having thus, I hope, pretty evidently investigated the nature of the kinkcough; order obliges me next to examine into the seat of this disease, a subject of no less importance.

C H A P. III.

Of the seat of the kinkcough.

INOW enter upon a subject still more contraverted than the former. Some authors place the kinkcough in the lungs; some, in the stomach; others, in both; while again others insist, that the proper seat of this disease is in the top of the wind-pipe and gullet: and all advance arguments in favour of their several opinions, which appear to them irrefragable. However, it hath been often found by experience, that arguments are not the less fallacious for seeming very plausible. For example, dissections are no doubt a noble source for ascertaining the nature and seat of diseases; and it is much to be regretted, that they are not more frequently practised with those views. But such disquisitions must be carried on by persons of nice unbiassed judgment;

THE KINKCOUGH. 19

judgment; so that the proper distinctions may always be made between cause and effect: otherwise they will be fully as apt to confirm error as to establish truth. This remark is not misplaced here, when we consider that no less a person than Doctor Astruc, from observing, upon dissecting the bodies of such as died of the kinkcough, ulcerations on the larynx and pharynx, concluded that the disease was an inflammation of those parts.

Though I cannot agree with this learned author concerning the nature of the kinkcough; yet as to the seat of it I pay equal deference to his opinion, and to the sentiments of other writers on the subject. I think, with him, that the larynx and pharynx are affected; with Willis, that the lungs are affected; and with Waldschmidt, that the stomach is affected. I take the liberty, however, to differ from those authors in this, that I do not believe any of the organs mentioned to be primarily affected, that is, to be

the principal seat of the disorder. Indeed that continuous membrane which invests the whole tract of the first passages and lungs internally, seems, in general, to be first affected by the miasms or contagious particles of all epidemick diseases; though each particular infection acts more specifically on one part of it, than on another. Thus anginous complaints chiefly affect the membrane of the throat; the measles, that of the lungs; the small-pox, that of the stomach; agues, that of the duodenum, &c. In like manner, it is highly probable, that though the miasms of the kinkcough may perhaps affect, the whole of this widely extended membrane, by sympathy or otherways, yet some part of the intestinal canal is the principal seat of the disease.

I shall draw arguments in favour of my opinion; first, from the nature of such habits as are subject to the kinkcough; secondly, from the nature and cure of the kinkcough; thirdly, from the nature of some diseases consequent upon

upon the kinkcough ; fourthly, from the analogy that the kinkcough bears to other diseases that are generally allowed to have their seat in the intestines. I shall treat of each of these particulars in order.

In the first place, it seems that the intestines of children are more irritable, and, by consequence, more easily affected than any other part of their tender bodies. For this reason it is, that the diseases of children, even the most remote from the intestines, affect that canal. Thus we see dentition almost constantly produces a diarrhæa, colick pains, and flatulency. On the other hand, an irritating cause in the intestines most certainly can affect the whole or any part of the nervous system. Doctor Harris has proved that almost all the diseases of children depend on an affection of the first passages. And the hysteria and raphania, two diseases evidently of the first passages, though the former seems chiefly to be seated in the stomach, and the latter in the guts, afford melancholy

proofs of the direful symptoms that can be excited in every corner of the body from that origin even in adults. If it be asked why an intestinal affection should produce the kinkcough? I refer the solution of this question to those who shall undertake to explain the manner of acting of the contagious particles of any disease whatever. We need only observe here, that if a cause such as worms, lodging in the intestines, can produce a cough, and even general convulsions; we may suppose another cause existing in the same bowel capable, under certain circumstances, of producing the kinkcough. The one case seems equally as intelligible as the other; although perhaps we shall never be able to explain the manner in which either is brought about; any more than why hemlock produces a vertigo; indian pink, a particular motion of the eyes; mercury, a salivation; cantharides, a strangury, &c.

Secondly, as to the arguments deducible from the nature and cure of the kinkcough

THE KINKCOUGH. 23

cough to prove that it is an intestinal affection, it is observable, that those children pass most easily through the disease that have an open belly; that vomits are most serviceable, when they render the body soluble at the same time; and lastly, that such patients bear the action of vomits, much better than purges: all which circumstances strongly point out that the intestines, and not the stomach, are the seat of the kinkcough.

Thirdly, as to the diseases consequent upon an obstinate kinkcough; these are chiefly the kings-evil and rickets. It is needless as well as improper to enter upon a long discussion of these maladies; as a few general remarks on each will sufficiently answer the present purpose.

It is universally allowed, that the kings-evil is chiefly seated in the conglobate glands; and probably those of the mesentery are first affected. This much is certain, that an enlarged belly and colick pains are among the first symptoms; and dissections prove, that the glands of

the mesentery are always obstructed in the kings-evil. We likewise observe in the rickets, a preternatural largeness of the belly, and other symptoms that point out a primary affection in that region. Besides doctor Heister, after dissecting six or seven bodies that died of this disease, mentions among the most usual appearances, that the belly was too large, from the intestines being distended to twice their natural bulk with air; that worms and a deal of mucus were in that bowel; and that the glands were obstructed and hard, particularly those of the mesentery. We may safely conclude that the stomach was always in a natural state; as this accurate anatomist says nothing of it,

It would therefore seem, that, when the kinkcough continues for a long time, the intestines lose their contractile power; on which account, as well as from the state of the fluids taken up by the absorbent vessels, obstructions are formed in the corresponding glands of the mesentery;

THE KINKCOUGH. 25

tery; and so either of the two mentioned diseases is produced, according as the constitution happens to be pre-disposed.

Fourthly, but what in my opinion tends more than any thing to confirm that the kinkcough hath its seat in the intestines, is that the returns of the paroxysms have generally been observed both by physicians and others to be periodical; from which, as well as from other circumstances, some of the best writers on the subject have been led to draw a parallel between this disease and intermittent fevers. Now, though it be still a matter of dispute, where intermittent fevers have their proximate cause; the most probable opinion is, that it lodges in the guts. It deserves indeed to be seriously enquired into, whether all intermittent distempers do not depend on a primary affection of that canal. It is exceedingly remarkable, that even intermissions of the pulse prognosticate with great certainty a future disorder in the intestines. I have met with some singular inter-

intermittent diseases which undoubtedly had their seat in that bowel.

A boy, about two or three years of age, was afflicted with a pain in his belly, which came at a certain hour every night, whether he happened to be asleep or awake; and continued for some hours so violent as to make him cry almost incessantly. During the fit the pulse was natural. In the intervals he made no complaint. Several other means having failed, a fomentation of rue, wormwood, and other anthelminthick herbs applied to the belly, on the access of the fit, gave immediate ease, and brought on a looseness which carried off the colick, and a great many worms at the same time. The colick never returned. The worms were cured by the usual means.

Another boy about a year or two older than the former, made an amazing quantity of urine every night, as regularly as the clock struck eight. This disorder afterward shifted, and returned at ten with the same regularity. If he was then

then asleep, the urine went into the bed : But if he happened to be awake, he filled a large chamberpot with what he then made, and in a few hours after. The urine, when so profuse, was without smell or colour. He had a wan sickly look, but complained of nothing. His belly was large and hard. He was of a delicate, irritable habit. His pulse was always calm. The cure of this disorder was accomplished by purging and cordial medicines. The stools were very offensive, dark coloured, and slimy.

I shall add one more case, not only because it relates to our argument; but also because it is but little, if at all taken notice of by authors. And as the method of cure differs from that commonly recommended in analogous cases, it will be an excuse for the length of it in this place. The case is as follows.

A middle aged gentleman, of a strong habit of body, having had occasion to be much abroad in the fields during bad weather, was seized with pain and inflammation

flammation of his left eye. For the first week the disorder was inconsiderable; so that he took little notice of it. The second week the pain was worse, and intermitted regularly. At the end of the third week, when I was called, the pain was become so violent as to be insupportable: but still there were complete and regular intermissions. The fit generally came on about two or three in the morning; and when awake, he was sensible of its approach, by heat in his forehead, heat, pricking pains, and weeping of his eye, and an aching pain on the left side of the upper jaw, which seemed particularly seated in one of the grinders; and there he thought was the origin of all his pain. These symptoms grew gradually worse; till at last the whole left side of his head, and particularly the eye, became affected with such excessive pain, that he despaired of living. He said his eye felt to him, as though a person was pulling it out of his head, by means of a hook. The pain always
went

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went off instantaneously, and generally about nine in the morning, afterwards he was quite easy, except as to a little heat in the eye, continuing in good spirits for the rest of the day, and till the return of the paroxysm. There was no swelling, and the inflammation was not great. The eyelids internally, and the white of the eye, were inflamed. The lucid cornea was a little obfuscated. The eye could not bear the light. He saw very little with this eye; and that through a mist. He had had very little sleep from the beginning of his disorder. He was even afraid of sleeping, because he generally awaked with the pain. He had been bled, and had used other evacuations; as also great quantities of the peruvian bark both internally and externally to the affected eye. He never had been attacked with an ague, but once, and that several years before, when he had two violent fits with the interval of a day and a night between them; but did not remember whether he had used any means of cure.

May

May 19. Being called to day, I found that he had passed a very bad night, and that his pain was excessive. He had had eight stools yesterday from a dose of Glauber's salt and manna.—I ordered two drams of polychrest salt to be dissolved in a pint of water, and to be taken at three draughts, with an interval of two hours between each, beginning immediately; and two leeches to be applied to the affected eyelids.—In the evening he was much better. The leeches had bled freely. He had three stools. The eye was to be fomented often with warm milk and water; and he got thirty drops of laudanum in a draught at bed-time.

May 20. He lay easy all night, but slept very little. What sleep he had did not occasion pain. About three in the morning he had some pain for a quarter of an hour. To day the solution of polychrest salt was repeated, which gave three stools.—In the evening the anodyne draught was repeated. In case the pain should return, the suspected tooth

was

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was to be drawn, and a couple of leeches were to be applied as before.

May 21. The pain was violent from ten to six o'clock this morning. The drawn tooth was found, and brought part of the jaw-bone with it. The leeches bleed freely. His pulse beat above a hundred times in the minute to day. The fomentation was continued, and the polychrest salt was repeated.— In the evening his pulse beat seventy times in the minute. The urine had a milky colour, and deposited a light whitish sediment. He was ordered the following bolus at bed-time:

Take of polychrest salt and vitriolated tartar, each ten grains; powder of ipecacuanha, four grains; pure opium, two grains; syrup of sugar, a sufficient quantity: mix them.

May 22. He had a very good night, having slept for the most part, and was refreshed with his sleep. Having felt himself tender within, he chose to have

no polychrest salt to day. The fomentation was often applied as usual, and he had a very good day.—In the evening his pulse beat seventy times in the minute. Having had no stool, the bolus, with an addition of twelve grains of rhubarb, was repeated; and two drams of polychrest salt dissolved in half a pint of water, was to be taken by eight in the morning, unless he should have stools before that time.

May 23. His feet were cold last night; he afterward grew warm, and then sweated profusely. The sweat ceased about five in the morning: upon which the fit came on, and continued violent for two hours. I ordered ten grains of the extract of the peruvian bark in the form of pills, and twenty drops of the acid of elixir of vitriol, in a glass of water, to be taken immediately, and to be repeated in the afternoon.—He had a tolerable day, though not entirely free from pain. He had three very dark fetid stools in consequence of the solution.—He was
ordered

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ordered a draught with fifteen drops of laudanum at night, and a solution of a dram and a half of polychrest salt in six ounces of water in the morning.

May 24. He had a very bad night with the usual pains. Sneezing relieved the pain of his eye when violent. He was ordered twelve grains of ipecacuanha in powder for a vomit; which brought up a great deal of tough phlegm. His pulse beat eighty times in the minute before taking the vomit, but only seventy-four times, in that space, after its operation. He had four foetid dark stools to day. The following bolus was ordered this evening. Take of rhubarb, fifteen grains; calomel, five grains; mix them with a proper quantity of syrup, and he took an ounce of common infusion of senna, with a dram of the tincture of senna next morning.

May 25. He had an easy night, but was afraid to sleep. The pain seemed as though it would have returned about four in the morning; but he had a stool

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at

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at that time, which he thought was the cause of his continuing free. He took eight five-grain pills of the extract of bark, with two large spoonfuls of the following julep every two hours to day. Take of spring water seven ounces; lemon-juice, three ounces; proof spirit, syrup of orange-peel, each one ounce; salt of tartar, two drams: mix them. Having had five stools, he got five drops of laudanum. He had a very good day, and twice slept for a little, without being the worse.—In the evening he complained a little of the heat, of aching and pricking pains, &c. which made him apprehensive of a bad fit. His pulse was rather full, and beat eighty-eight times in the minute. I ordered the pills and julep to be taken every three hours through the night, in the absence of a fit: but if the fit should return, the julep was to be continued without the pills, and a glyster was to be injected, consisting of a large spoonful of common salt, dissolved in a pint of chamomile tea. A

large

THE, KINK COUGH. 35

large blister was also applied to the arm, and was not to be removed for thirty-six hours. The following pills were given at bed-time. Take of the aloetic pills of the Edinburgh dispensatory, twelve grains; opium, two grains: mix them, and make three pills.

May 26. He had a pretty good night, but slept none. He did not take the bark after midnight, as he was hot, and thought himself not so well about the usual time of his becoming worse. At seven, he had a slimy dark stool from the glyster.—He had a pretty good day, and slept two hours in the afternoon. He could open the affected eye in a dim light. His pulse was calm. He took eight pills and two spoonfuls of the julep, every two hours to day.—In the evening his pulse beat eighty-four times in the minute. He had a small stool. He took the pills as last night, with an addition of four grains of the aloetic pills. If he should not have a stool in the morning, the glyster was to be repeated. Eight

Di 2 pills

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pills of the bark with three spoonfuls of the julep were also to be taken every four hours through the night.

May 27. He had a good night, having slept for an hour together. He began towards morning to be uneasy from the want of a stool, the glyster was therefore given, by which he had a very plentiful evacuation, and of a better colour, though some part of it was extremely dark. He continued low afterwards. His pulse beat eighty-six strokes in the minute. The pills and two spoonfuls of the julep, were taken every three hours to day. The edges of the eyelids were anointed with a liniment, consisting of ointment of tutty, and saturnine ointment, each equal parts, and a sufficient quantity of olive oil.— He had a pretty good day.—In the evening his pulse beat seventy-eight strokes in the minute. His urine was limpid with a pellicle on the top, and with a white light sediment. The same opiate pills were ordered for bed-time; and the bark and julep every four hours through the night.

The

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The edges of the eye-lids were also to be anointed with the liniment night and morning.

May 28. He had a good deal of pain in the night; but slept a little. His pulse beat eighty-six times in the minute. He had a small stool this morning.—He took eight six-grain pills of the bark, and three spoonfuls of the julep every four hours to day.—In the evening he had a stool in consequence of a glyster. He had some pain in his forehead. His pulse beat eighty-two strokes in the minute. Twenty grains of the aloetic pills, and two grains and a half of opium made up into four pills, were ordered immediately. The bark was left off; and the julep was to be continued every four hours.

May 29. He had a good night. He was very low this morning. Pulse beat seventy-two strokes in the minute.—He took six pills of the bark, and twenty drops of the elixir of vitriol every five or six hours to day, beginning at seven in the morning. He slept for an hour a little after

noon, and without any succeeding pain. — In the evening his pulse was soft and beat eighty-six times in the minute. Twenty-three grains of the aloetic pills, and three of opium were taken for a dose this night. And the julep was to be repeated through the night as before.

May 30. He had an exceeding good night, and was quite free of pain this morning. The inflammation was abated; the affected eye could bear a little more light; and he began to distinguish objects with it. His pulse beat eighty times in the minute. He had two stools. — He took the bark and elixir thrice to day. — The liniment was still continued. A small blister was applied to the nape of the neck with a view to be kept open with epispastick ointment. And the same anodyne laxative pills were given at the usual time.

May 31. He had a good night, and continued better to day. His pulse beat eighty strokes in the minute. He had one stool. — The same course was continued.

noon

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June

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June 1. He slept none after two in the morning; and he awaked with a slight fit of pain affecting his eye, gum, and the whole half of his head, which lasted some hours.—The inflammation was less, but his eye watered more to day. His pulse was soft, and beat eighty-eight times in the minute. He had two stools. The issue discharged well, and was dressed twice a day. The bark and elixir were continued as before. The pills were repeated at night with an addition of half a grain of opium.

June 2. He slept little, but had no pain in the night. He had two stools.—The same course was continued.

June 3. He had a very good night. The inflammation and obfuscation diminished; and he bore still more light with the affected eye. His pulse beat seventy-five times in the minute.—The same method was continued.

June 6. He continued to mend; and was abroad to day. The issue discharged properly. He was desired to take the

bark and elixir only twice a day. The anodyne pills were to be gradually diminished.

June 9. The inflammation was quite gone; the obfuscation was less; and he could read large print with the affected eye. It watered only towards night. He was in other respects quite well.—The bark and drops were continued. He took only half the quantity of the anodyne laxative pills last night. The same dose was to be taken to night, and none after.

June 14. The eye continued to gain strength. He took no more medicines.

Doctor Morton and Baron Van Swieten, both take notice of an intermitting ophthalmia. The former has given two instances*; whereof the one was a tertian, and the other a quotidian. Baron Van Swieten mentions only a quotidian†; and it was cured by the bark, after all

* Pyret. Exerc. i. cap. ix. Hist. 5, 16.

† Comment. Vol. ii. p. 534.

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other means had failed. Doctor Morton cured his quotidian ophthalmia by procuring two or three stools every other day; and by giving the peruvian bark on the intermediate days; and by the use of anodyne topicks to the affected eye. For the other patient he ordered bleeding, anodynes both internally and externally, and brisk purges, chiefly with a view to bring on a genuine ague, which she had lately laboured under. The means succeeded in a few days: upon which the ophthalmia disappeared, and the ague was cured in the common way.

In the case which I have narrated there was no immediately preceding ague. Van Swieten's patient indeed had the same horrible sensation as mine when in the fit. But neither of the learned authors make any mention of a hemicrania, or pain, affecting one half of the head. I therefore must look upon my case as different from any of theirs; and from the symptoms it comes nearest to the ophthalmia choroideæ of Sauvages. It may

therefore

therefore be called ophthalmia choroidea quoti-diana, or quotidie intermittens.

The following method of cure seems well adapted to intermitting ophthalmies in general.

First let blood; in a few hours after give a vomit; in the evening apply a large blister between the shoulders; and next morning give a purge of Glauber's or polychrest salt. In the evening after the operation of the purge, give pills composed of a scruple of aloetic pills and a grain of opium. These pills must be repeated every night, or rather some hours before the approach of the fit, gradually increasing the opium, so that the pain may be effectually warded off; and giving in the mornings, when necessary, a solution of polychrest salt in water to quicken the operation of the laxative, so as to procure two or three stools daily.— A small quantity of the peruvian bark, with elixir of vitriol, may be given twice a day just to support the strength. But perhaps

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perhaps the elixir given in chamomile-tea will in most cases be sufficient.——

A couple of leeches may be applied near the part affected, at any time when the inflammation seems considerable.——

The room should be cool, and as much darkened as to render any close covering to the eye unnecessary.——

Warm milk and water may be often applied to the eye with a sponge. And when the symptoms are diminished, a little of the liniment mentioned above, with the addition of two grains of camphire to the whole quantity, may be used every night and morning.——The diet should be cooling and diluting; as small broth gruel, cheese whey, barley-water, toast and water, &c.

This method should be continued till the bowels are properly cleansed, which you can judge of, by examining the stools from time to time. And in general, it will probably turn out, as in the case before us, that the fits will gradually abate, as the stools acquire a better colour, till

Hence

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at last good health and natural stools return at the same time. If after all the disease should continue, it will be then proper, with the illustrious Baron, to attempt the cure by a plentiful use of the peruvian bark, in the same manner as in agues. Such a practice is then safe, and perhaps will always succeed: but if attempted early in the disease, it will be attended with great uncertainty, if not with danger. But to return from this digression.

Under this head of analogy some intestinal diseases, in so far as they are of a contagious nature, ought not to be passed over in silence, as it will be found that they add weight to my opinion concerning the proximate cause of the kink-cough.

Sir John Pringle has observed, that a dysentery arising from what is called catching cold, spreads afterwards by contagion. The same remark every experienced physician must have made, on a very analogous disease, the putrid fever,

Hence

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Hence we infer, that this bowel is the most likely place for generating an infectious disease: which inference is further supported by the following reasons.

First, a great variety of humours is blended together in the intestines: secondly, on account of the large extent of that bowel, accumulations are more generally formed, and lodge also for a much longer time in it than in any other part of the body: thirdly, these heterogeneous lodgments must produce various unnatural ferments, which are no doubt the source of many diseases, and probably give rise to most contagious ones, and among the rest, to the kink-cough. Accordingly the best writers on the dysentery have found, that the stools are contagious. And Doctor Zimmerman even asserts, that the contagion of this disease lies chiefly in the stools. In a word, the intestinal tube is so often to blame as a morbid cause, that it amply deserves the discussion of some able and experienced pen.

I hope, from what has been said, it is rendered highly probable, that the seat of the kinkcough is in the guts. With regard to the opinions of former writers on this subject, no formal refutation seems necessary; since the arguments, adduced in support of one, must necessarily invalidate the rest. I shall therefore only observe further, that the notion of the lungs being the seat of the kinkcough is very improbable; first, because the generality of pectorals do more harm than good; secondly, because pulmonary coughs, if not dangerous, and especially, in young subjects, terminate much sooner than the kinkcough; thirdly, because I do not know that the rickets or scrofula, though often the causes, were ever the effects of a pulmonary cough.

As to the opinion of this disease being seated in the stomach; I shall add to what has been already advanced in refutation of it, that an immediate affection of that bowel would probably be attended with more violent symptoms, as pain, sickness, faintness,

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faintness, &c. none of which are ever observed in the kinkcough. Beside, we can never suspect any intermitting disorder of having its seat in the stomach, when we consider, that vomits render obscure intermissions more distinct. It would seem, that the interfering cause, a foulness of stomach, being thus removed, the pure intestinal symptom of intermission becomes more evident and distinct.

faintness, &c. none of which are ever observed in the kinkcough. Besides, we can never find any thing disor-

CHAP. IV.

der of having its seat in the stomach, when

Of the causes of the kinkcough.

I Have given a full and true description of the kinkcough, and from that and other faithful observations, have endeavoured to establish the true nature of the disease. Besides, I have delivered my reasons at considerable length for believing it to be an intestinal affection. We are now naturally led to inquire into the causes which produce this disease.

The causes of a disease are usually divided into remote, or predisposing, and into occasional, or exciting causes. The former are inherent in the constitution of the patient; the latter are adventitious, and proceed from the air, soil, way of life, &c. Neither the remote, or occasional causes can of themselves produce a disease: but when they meet together, they constitute what is called the proximate

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mate cause. This proximate cause is the very essence of a disease; because while it is present, the disease is present; and when it is removed, the disease also is removed.

We see of what consequence it is, to be acquainted with the proximate cause of a disease; since we cannot be supposed to understand the true nature of the one, while we are ignorant of the other. Indeed, it is chiefly owing to our ignorance of proximate causes, that the practice of physick is, in too many instances, still so very defective. But to return to my design.

As the kinkcough is peculiar to childhood, what characterizes the constitution at that time of life, is most probably, the chief predisposing cause of this disorder. Now we know, from anatomy, that the nervous system bears a much larger proportion, to the other solid parts in children, than in adults. All their solid parts are likewise of a much softer texture, and of a much quicker growth. On these accounts chiefly, the human body is then endued with more irritability

lity, than at any future period of its existence. This irritability is, no doubt, a principal reason why infancy is so very subject to nervous maladies, and among the rest to the kinkcough. Hence also we see why adults, that have escaped this distemper in their infancy, are seldom affected with it, and why those that happen to be affected with it, are chiefly women, and persons of a delicate tender habit.

But there are other causes that add to this constitutional irritability, and by consequence, render the body still more liable to the kinkcough.

These are, first, a hereditary pre-disposition to some spasmodick disorder; secondly, the actual existence of such a disorder; thirdly, a redundancy of vitiated humours in the stomach and guts; fourthly, worms; fifthly, dentition; sixthly, catching cold; and seventhly, acute diseases in general. All these, as they undoubtedly add to the irritability of the system, must of course be considered as so many pre-disposing causes. It is
for

for this reason, that we commonly find the kinkcough immediately preceding, or succeeding some other disorder, or actually complicated with it.

Hitherto we have only shown why the early stage of life is most liable to the kinkcough, by pointing out the chief pre-disposing circumstances that must render it susceptible of a nervous disease, such as the one in question. I now come to the exciting powers, commonly called the occasional causes.

These may be resolved into one, namely, infectious miasms capable of generating that disease and no other.

Though it be very evident, that there are such specifick miasms; yet they never perhaps can be made the object of our senses. However, an enumeration of their effects will sufficiently point out their true nature. These miasms act upon the nervous power, and so increase the irritability of the system; as children are more susceptible of colds during that disease than at any other time; and are besides uncommonly fretful and ca-

pricious, even in their best intervals. These miasms, no doubt, mix with all the humours: but, so far as our senses can discover, act chiefly on the mucus. We judge, that the mucus is affected; because an evacuation of it out of the body always palliates the disease; and that the intestinal mucus is principally affected; because an evacuation of it, by stool, gives the most sensible relief.

From what has been said, it appears, that the kinkcough answers to the definition of a pestilential disorder, such as the plague, small-pox, or measles; since its miasms are contagious, and act chiefly on the nerves. The kinkcough has this likewise in common with these other diseases, that a moist skin is one of the most favourable symptoms. It differs in so far, that it is not generally attended with any cutaneous eruption; though a slight affection of this kind hath sometimes been observed.

Having thus, I hope, sufficiently cleared up the nature of the contagious particles

cles, which give rise to the kinkcough; I next proceed to inquire into their origin.

We have no very early accounts of the kinkcough: notwithstanding of which, no author, so far as I know, pretends to say, that it is a new disease. Very probably it hath always prevailed in these kingdoms: and this pestilential disorder may be the growth of Europe; as the plague, small-pox, and measles certainly are, of much warmer regions. I am led to think so, because the infection of the kinkcough is much less active, than that of any of the other diseases mentioned. Beside, according to Doctor Hillary's observation, the island of Barbadoes was not visited by the kinkcough for many years; a circumstance which perhaps has not happened in any European island, though inferior to the American one as to extent, and very greatly so, as to population.

If it be granted that the kinkcough is endemick in Europe, I would endeavour

to account for its contagious particles in the following manner.

Under certain circumstances of the air, &c. the various humours composing the intestinal contents, may undergo an uncommon degree of fermentation. The fermenting mass, by its unnatural stimulus, will produce a vitiated secretion into that bowel. And this additional mixture will probably render the whole more and more active and exalted, till at length there are generated particles of a deleterious nature, operating on the mucous glands of the intestines in particular, whereby that secretion is increased and vitiated, and so the kinkcough is produced.

The kinkcough being once produced, afterward spreads by contagion; in the same manner as a dysentery, once produced, multiplies through its own baneful influence. Hence we see why some authors assert that this disease has no dependence on any known qualities of the air; because that they have observed it to prevail

prevail under all sensible variations of that element. In reality, when we consider the length of the disease, and the fluctuating state of the atmosphere, we must agree with those authors so far as to be of opinion, that it seems no further necessary than just to give being to the specific miasms. If we can once suppose them formed, we can readily conceive that the disease will creep, by its contagion, over a very extensive country; and even be conveyed beyond seas into very remote regions. This is quite consistent with observation: for the kink-cough spreads by very slow degrees; in so much that it is very common to see it rise in one village, while another, not above a mile distant, is entirely free from the disorder. Now if it depended, like many epidemick diseases, on the state of the atmosphere, it would occupy a much greater tract of country at once, and very probably terminate also much sooner. This doctrine is not favourable to the opinion, that a change of air is serviceable

in the kinkcough. Indeed, so far as my experience extends, I have seen no good from it. And even, if a change of air was really found to be so very useful, as commonly alledged, the good effect would most naturally be accounted for, from the common principle of its being useful in many diseases, particularly those called nervous.

It may be asked, as the kinkcough depends only upon the effects of a fermentation in the guts, why children should not be afflicted more than once with it? This is a difficult question; but it affects every known supposition as much as the one here advanced. The most probable answer that occurs to me is, that such a change is induced in the constitution by the disease, as, for a considerable time, renders the body incapable of further infection. In more advanced life, the constitution, from a great variety of concurring causes, is much altered; and, by consequence, pre-disposed to diseases of a very different nature.

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nature. And as an occasional cannot, of itself, produce a disease, so we see the reason, why adults in general are proof against the infection. And, among those that happen to catch it, we shall find such deviations from what is natural to the constitution, at that time of life, as will tend to illustrate and confirm the theory advanced in this chapter.

From what has been said, it is at least to be hoped, that I have discovered the true nature of both the pre-disposing and occasional causes of the kinkcough; since I have not only a priori, but likewise a posteriori, come to the same determination on these important points, according to the following aphorism of a celebrated pathologist. Ita demum methodo synthetica pervenitur ad cognitionem causæ morbi, quam illa (*seminia morbi et potentia nocentes*) junctim constituunt. Quin et eadem opera, a priori, quod aiunt, eruitur natura morbi; ut, instituta collatione, eadem per methodum analyticam inventa comprobari, aut error in alterutro argumentandi

argumentandi genere commissus detegi ac corrigi possit*. “Thus at length we have attained by the synthetick method a knowledge of the proximate cause of the disease; which proximate cause is produced by a conjunction of the remote and occasional causes. Besides, the nature of the disease is thus investigated from reason: so that, by comparing this theory with the result of our inquiries upon the same subject by the analytical method†, and finding them to agree, our doctrine is established; or, if any error has been committed according to either method, it is thus found out and corrected.”

* H. D. Gaubii Institut. Patholog. § 80.

† See Chap. 2d above.

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CHAP. V.

*The history of hemlock as a cure for the
kinkcough.*

SUCH is the history of a disease, for which every author asserts that we have as yet no certain and effectual cure; nor any one medicine that ought to be used in many cases that occur. Indeed, the multiplicity of indications in the methods of cure for many diseases is the best proof that there is more of art than nature in them; and that, sooner or later, they must all give way to a more specific treatment. In no disorder is the officiousness of art more obvious, than in the one at present under consideration: and, of course, every method hitherto followed is at best but palliative. This unsuccessful treatment is probably the reason, why Doctor Willis's observation holds true even

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even in our times, that old women and quacks are oftener consulted, on account of the kinkcough, than physicians. It is very rare that a physician is consulted, except when the disease is manifestly very dangerous, and the child likewise of great consequence. Some very obstinate cases of kinkcough having come under my care, I had it in my power fully to experience all the common remedies; and to ascertain how little was to be expected from them. I therefore considered it as my duty to attempt some new method: and being convinced that the disease was spasmodick, and that hemlock was one of the best anti-spasmodicks, I came to the resolution, as soon as an opportunity should offer, of making a trial that promised much good, and could not possibly do any harm. The first case that presented to me was the following.

CASE I.

Mrs. Hodgkinson, aged 30 years, of a weak thin habit, and the mother of several

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several children, had laboured under the kinkcough for a fortnight when I visited her. The kinks were frequent, but most so in the night. Sometimes the fit was so severe as to threaten suffocation. She sometimes expectorated a white thick phlegm, and then the fit was short. A severe fit was always attended with a copious expectoration. For the first four days, she vomited in the fit, and brought up phlegm, during which time she was easier.

She complained also of pain in her right side, which sometimes shot through to the other side, and sometimes downward, so as to imitate labour-pains. She was far gone with child; being within a fortnight of delivery. For the last eight days, she said, the child was placed higher than any of her other children ever had been. The kinkcough was then epidemick; and her own children were affected with it; but the disease in them was upon the decline. She herself never had the kinkcough before; nor had

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had ever been subject to coughs of any kind, during pregnancy.—She had been bled at the arm and purged with manna a few days before I saw her; which treatment, she thought, had made her worse.

April 22d, 1768, I ordered eight grains of rhubarb with half a grain of emetick tartar to be taken at bed-time; and a blister, for the pained part, which was to remain applied twenty-four hours.

April 24. The pain of her side was gone. She had two stools from the powder. In other respects there was no alteration.

I ordered two drams of the hemlock-mass, to be divided, into twenty-four pills; whereof two were to be taken every night and morning.

The kink went off so soon, that I could scarce credit it; and she had scarce any remains even of cough, when she was brought-to-bed. She had a very good time; and the child was healthy. She got no more than twenty-four pills.

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In the year 1770, a gentleman in Scotland, my friend, having accidentally mentioned, in a letter to me, that his children were ill of the kinkcough, I acquainted him with what I knew of hemlock as a medicine for that distemper, and recommended the use of it; before my letter came to hand, these children had left off taking medicines, as being much better.

CASE II.

In August 1771, a poor woman applied to me on account of her child, which was afflicted with the kinkcough. The child was three years of age; and the disorder was of a month's standing. I ordered the hemlock-mass in the form of a powder with liquorice-root: but, as very little attention was paid to my directions, a minute detail is unnecessary. There was, however, notwithstanding all disadvantages, a degree of success which served to make me anxious for more favourable opportunities of confirming the efficacy of hemlock, as a cure for the kinkcough.

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In a few months after I was called to the following patient:

CASE III.

Miss K. aged three years, and naturally a strong healthy child, having lately had the measles, the cough continued afterward, and terminated in the kink-cough. This disorder was of a fortnight's standing. The fits returned every three hours, or oftener, and were very severe. They were most violent, when at the greatest intervals; her looks were feverish; her tongue was white; and her pulse was very quick. The urine had a copious heavy whitish sediment. The stools were regular. She was very fretful and averse to taking medicines.

December 25, 1771, I ordered the following mixture to be given by little and little, so as to be finished in twenty-four hours; to be repeated daily; and, after two days, another grain of hemlock to be added.

Take

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Take of spring water, an ounce and a half; lemon-juice, an ounce; syrup of sugar, half an ounce; salt of tartar, forty grains; hemlock-mass, a grain: mix them.

December 28, she was much better, her fits being milder and less frequent, and her phlegm looser. Her nights had been good, except the last, during which she was restless and hot, owing to her having eaten the day before a good deal of pye-crust which had been warmed a second time over the fire. Her tongue was clean; her pulse was calm; and the sediment of her urine was less in quantity, lighter, whiter, and more equal.

A little manna was given in order to promote two or three stools; the mixture with two grains of hemlock-mass was to be continued; and in a day or two a third grain was to be added.

After this I did not visit my patient, the distance being considerable, and the circumstances of the case being so greatly changed for the better, that my presence

F

was

was not necessary: but I had accounts occasionally from Mr. Smith, the surgeon in attendance.

January 8. She scarce ever kinked, and she coughed little. She was playful, and got strength fast.

She took the mixture with three grains of hemlock-mass regularly every day.

January 15. The kink was gone, and the cough was inconsiderable. She had taken three grains of hemlock daily for four days, which purged her a good deal and kept her constantly sick. Upon this the mixture was continued with only two grains: and, after thus diminishing the dose, her appetite and spirits became good, and she rested well. She had a stool or two every day. Her urine deposited a whitish sediment in small quantity.

January 23. She coughed little or none; and her strength and complexion returned fast.

She continued the mixture with two grains of hemlock.

February 20. Having been in the neighbourhood, I visited my patient.

Her

THE KINKCOUGH. 67

Her parents told me, that, after she had been in a manner well for five weeks, the kinkcough with feverishness returned on the fifteenth; from her having been allowed to expose herself imprudently to cold, and to fill her stomach with warm pork-pye. Mr. Smith had very properly purged off this load with a dose of senna-tea. When I saw her the fever was gone; and the kinkcough was much abated.

She continued the mixture with two grains of hemlock.

March 5. She was quite well, the kinkcough having left her above a week, and her medicine was omitted. She had all along been fond of the medicine.

Mr. Smith communicated to me the following case which came in his way some weeks after I had prescribed for the last patient.

C A S E IV.

Miss M. aged four years, had laboured under the kinkcough for a month, when

she began to use the mixture as above with three grains of hemlock daily. She continued to take it regularly for a fortnight; in which time she was so well that her parents did not choose to give it any longer. During the cure she had sometimes one and sometimes two stools a day.

I was called on the ninth of April, 1772, in the evening, to the following very remarkable case.

C A S E V.

A. B. aged one year, and not yet weaned, had been distressed with a cough and oppression at his breast since the twenty-eighth of the preceding month. For the last three days he had hooped frequently, and brought up phlegm sometimes by vomiting. His eyes were tender and could not bear the light. He had slept but little, since the sickness began. He seemed to have great thirst, for he inclined always to be sucking. The spittle drove from his mouth; and he was

THE KINKCOUGH. 69

very fretful: His countenance was paffy and wan. He had bred only two teeth; to wit, two of the lower fore-teeth: but the two directly opposite to those were almost come through the gum. His pulse was full, and intermitting, and beat about fixty times in the minute. He had generally one coftive stool a day. —Oxymel of Squills never opened his body, though he had taken it frequently, since the cough began, fo as to make him vomit. He was the only surviving child of three, the two others having died, at the fame age with him, of epileptick fits.

A blister was applied immediately to the leg, and was directed to be kept on twenty-four hours. Befide, I ordered a large spoonful of the following mixture to be given every two hours, till he should have a stool.

Take of spring water, two ounces and a half; syrup of fugar, half an ounce; magnesia, thirty grains; spirit of hartshorn, twelve drops: mix them.

April 10. He had rested well in the night, had a loose slimy stool, and was brisker. The gum was lanced this morning, to make way for the teeth: and the following mixture was ordered to be given by spoonfuls, so as to be finished in twenty-four hours, and to be repeated daily. On the third day, a second grain of hemlock was to be added to this medicine, finding it to agree.

Take of spring water, two ounces and a half; syrup of pale roses, half an ounce; hemlock-mass, one grain: mix them.

April 15. He was better to-day than he had yet been. The hooping was milder, though much the same as to frequency. He slept pretty well in the intervals. His pulse was rather quicker, but still somewhat unequal. The gums being swelled, and the impressions of teeth appearing, one was let out below yesterday, and two above this morning. He had taken the mixture with two grains of hemlock regularly since

THE KINKCOUGH. 71

since the twelfth, and had only one costive stool a day during that time.

The mixture was continued with an addition of two drams of the syrup, and a third grain of the hemlock. Besides, in case the cough should at any time prove much worse, a blister was ordered to be applied to the other leg.

April 20. I visited the child, and found him very cheerful. As he had coughed a good deal, though without much hooping, on the sixteenth and seventeenth, the blister was applied the evening of the last-mentioned day. The hooping fits were now much milder, and returned scarcely once in two hours. He had had two very slimy stools every day, since the addition of syrup. For the last two or three nights he had sweated a little; a circumstance which, the nurse said, had not happened to him before, since the beginning of his illness. He used to be much oppressed with phlegm, and to vomit once in two or three days: but he had vomited none for these several days. His skin was cool; and his pulse was more

regular. More teeth seemed to be advancing.

He took the mixture with three grains of hemlock regularly.

April 23. He had been hot for the last two nights, and dull in the day, always keeping his fingers in his mouth. The kinks were almost gone; but he continued to cough a good deal, especially in the night. The swelled part of the gum was lanced yesterday; and he had two very slimy stools by means of some manna, the mixture having failed in its laxative quality. He had not expectorated since the twentieth, and had breathed very easily during that time. He was this day very chearful.

The mixture was ordered to be continued with three grains of hemlock and an ounce of syrup, or as much as would procure two stools daily.

April 29. He continued to mend. He slept well in the night, and was cheerful in the day. He had cut a tooth where the gum was last lanced. For some

THE KINK COUGH. 73

some days he had coughed every hour and a half, or thereabout, and brought up with ease a good deal of white loose phlegm. Since last night he had not coughed more than every three hours, which rendered his expectoration more difficult. His pulse was still rather sluggish, and somewhat unequal. He had taken the mixture with three grains of hemlock, and sometimes one ounce, and sometimes six drams of the syrup; by which means he had been now and then costive, as the ounce of syrup gave but two stools. The stools were still very slimy.

May 1. He recovered fast. A tooth was cut through, and there was no appearance of more. He coughed about four times in the night, and as often in the day. He kinked very little. He expectorated a white thick phlegm and with ease, once or twice a day. He had sometimes two stools, and sometimes one a day.

He continued his medicine.

May

May 6. He gained daily flesh, strength and spirits. He coughed four or five times in twenty-four hours; and sometimes still kinked a little. His expectoration was easy, and white and thick like matter, but of a looser texture. One night he coughed but once, and then got nothing up. In the morning his breathing was a little affected; upon which he got a tea-spoonful of oxymel of squills, which made him vomit a good deal of phlegm, and rendered his breathing free. His pulse still intermitted. There was no more appearance of teeth. He had bred six since the ninth of last month.

He continued the mixture daily; but with the same irregularity as to the quantity of syrup, and with the same effects.

May 13. He had not kinked oftener than once in twenty-four hours, and then very little, since last report; and he had kinked none at all for the last three days. His cough was very trifling. He rested well in the night, and had a stool or two every day.

He

THE KINK COUGH. 75

He continued his medicine.

May 20. His cough had left him, and he was quite well.

I saw this child on the seventh of June following. He was then strong and healthy. He had a remarkable freshness of complexion, and a liveliness of spirits, which he never had before. His pulse was quick and regular, as a child's at that age ought to be. He had two or three natural stools daily. He was soon to be weaned, and in the mean time continued to be suckled by the same nurse.

Being now perfectly convinced that I had discovered an agreeable, certain, and expeditious, cure for the kinkcough, I industriously, as I could, with confidence, laid myself out for more patients; and finding that this disease prevailed in the neighbourhood of Kegworth in Leicestershire, I wrote to my worthy friend Mr. Samuel Yorke, surgeon and apothecary there, intimating my desire to have some patients labouring under the kinkcough, and that I would attend them without fee or reward. Accordingly he furnished me with
the

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the following six patients. It is proper, however, to observe, that, having been obliged to set out for London on account of my own health, I visited these patients but twice; namely, on the twenty-third of May, when I wrote their cases, and put them on a plan of cure, (which Mr. Yorke was so kind to take charge of) and on the tenth of the following month, when they were all cured, or nearly so.

CASE VI.

Sarah Wayte, aged eleven months, and not yet weaned, was afflicted with the kinkcough. She had been ill about a month; but she had had the whooping only for a fortnight. Her nose and eyes had run, as from a cold, ever since the beginning of her disorder. Her nose was stuffed and dry, and her cough was also dry, in the night. She was never hot, but during the fits of whooping. She had a fit every hour, and sometimes oftener. She did not vomit with the fits, except immediately after sucking. The fits were most severe,

THE KINKCOUGH. 77

severe, and most frequent, in the night. Her appetite was bad. Her pulse was calm. She had not had a stool for the last two days.

May 23. I ordered the following mixture to be taken by spoonfuls, so as to be finished in twenty-four hours; to be repeated daily, finding it to agree; and a grain of hemlock to be added, every other day, till good effects should be produced.

Take of spring water, two ounces and a half; syrup of pale roses, half an ounce; hemlock-mass, one grain: mix them.

May 24. A good deal of the medicine was wasted in giving it, as she disliked it. She had one stool last night, and rested better than usual, having kinked only three times. The fits were as frequent to-day as ever, but shorter. Her expectoration was more free; she vomited a large quantity of thick phlegm.

The mixture was repeated.

May 25. She had not so good a night, having kinked almost every hour. She vomited

vomited twice to-day. Her pulse was rather quick.

She continued the mixture.

May 26. She was much as yesterday. Her expectoration of phlegm was free, and copious; and she had a loose stool.

May 27. She took none of her medicine last night, nor to-day till noon. She had a bad night, having coughed sometimes every quarter of an hour.

It being found that the syrup was disagreeable to the child, a little manna was added, instead of it, to the mixture; which she began with at noon, and took very well.

May 28. She had a pretty good night, and did not hoop quite so often to-day. She was observed to be sleepy after taking the medicine.

The mixture was continued with the addition of a second grain of hemlock.

May 29. She rested better in the night. Her fits were less frequent. Her pulse was calmer. She had one stool to-day.

The mixture was continued duly.

May

THE KINKCOUGH. 79

May 30. She continued to mend. She had a loose stool.

The medicine was continued with three grains of the hemlock-mass.

May 31. She was very cheerful. The fits were much less frequent and milder. The vomiting was gone.

The medicine was to be continued regularly.

June 1. She was better in all respects.

The medicine was continued, with four grains of the hemlock-mass.

June 2. She was better in every respect since yesterday.

The mixture was continued duly.

June 3. She coughed thrice last night, and four times to-day; but kinked none. She cut a tooth to-day. Her pulse was calm.

The mixture was repeated with five grains of hemlock.

June 4. She had three fits of coughing last night, and more of them than usual to-day, but hooped none. The mother gave her none of the medicine.

June

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June 5. She coughed twice last night, and three or four times to-day, without hooping. She cut two teeth, and two more were presenting; but her mother would not allow the gum to be lanced. She had one stool.

She took her mixture regularly.

June 10. She mended very fast from the thirtieth of last month; insomuch that, by the third of this, she was almost well. The cough afterward became more frequent, probably from dentition, as the hooping fits did not return. A tooth was cutting the gum to-day. She had two stools.

She took the mixture daily.

June 11. She had a very good night, having coughed but twice. She had two stools.

The medicine was continued.

June 15. The mother and child having been from home since last report, the mixture was discontinued. She coughed and expectorated but little.

The mixture was repeated, with five grains of the hemlock-mass.

June

THE KINKCOUGH 31

June 16. She coughed a little. Her pulse was calm. Her stools were natural. She took the mixture regularly.

June 17. Having caught cold, her nose and eyes ran much, and she coughed often, but never kinked.

The medicine was repeated.

June 19. Her cough was very trifling; and she was in good health.

The medicine was omitted.

CASE VII.

Elizabéth Page, aged four years, laboured under the kinkcough of a month's standing. The kink had attended her illness from the beginning. It returned once every hour or oftener, especially if any thing vexed her. She generally puked, and brought up much phlegm in the fit. A full meal always caused a fit, which ended in vomiting. This disease had been much the same for the last fortnight. She was commonly hot in the night, and often hot with coughing.

G

Her

Her breathing was free; her pulse was calm; and her appetite was good. She was troubled with thirst. She had two stools, and sometimes more, in the day.

May 23, 1772. I prescribed the following mixture to be taken daily; and the hemlock to be increased a grain every other day till good effects should be observed.

Take of spring water, two ounces and a half; lemon-juice, one ounce; white sugar, a dram and a half; salt of tartar, forty grains; hemlock-mass, two grains: mix them.

May 24. Her complaints were much the same. The medicine agreed well with her; and she took it regularly.

May 25. She had a better night, and was better to-day. She kicked but thrice in the night. Her stools were as usual.

The mixture was continued with an additional grain of hemlock.

May 26. She had three fits in the night; but they were milder and shorter.

THE KINK COUGH. 83

Her cough was less severe to-day than yesterday. She had one stool.

She took the mixture duly.

May 27. She slept well, and continued to mend. Her appetite was good.

The mixture was continued, with four grains of hemlock.

May 28. She had a good night; and was still better to-day than yesterday, the fits being milder as well as less frequent. The stools were regular.

The mixture was continued.

May 29. She had very little complaint; and had not taken all her medicine.

June 2. She continued much better. She coughed twice last night, and a few times to-day. She had taken no medicine since last report.

The mixture was repeated, with five grains of the hemlock-mass.

June 3. She was much better; but had not taken all the medicine.

June 4. She was so well as to require no medicine.

June 10. She was in good health, and had been free from the kinkcough more than a week.

C A S E VIII.

John Page, aged six years, had laboured under the kinkcough for a fortnight, and had been affected with the whooping fits for more than a week. At first he was troubled with headach, hoarseness, and sickness; but he never had any sore throat. He was also chilly and hot by turns at the beginning of this disease, and was sometimes a little so at this time. He kinked twice in the night, but oftener in the day. He expectorated phlegm with the fit, and also vomited with it, if his stomach happened to be full. He had thirst. His pulse was calm. His appetite was good. He had two stools every day.

May 23, 1772. I prescribed the following medicine with the usual directions.

Take of spring water, two ounces and a half; lemon-juice, half an ounce;

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ounce; white sugar, a dram and a half; salt of tartar, twenty grains; hemlock-mass, three grains: Mix them.

May 24. There was no alteration.

The mixture was repeated.

May 25. He had a better night. He kinked twice, but brought up little phlegm.

The mixture was repeated with four grains of hemlock.

May 26. He had a pretty good night. The kinks were milder and shorter. He had one stool.

The mixture was repeated as yesterday.

May 27. He had a good night; and continued to mend in every respect.

The medicine was repeated with five grains of hemlock.

May 28. He slept well, and was much better to-day.

The same mixture was repeated.

May 29. He was almost well. He had not finished the mixture.

June 2. He still coughed a little. He

had taken no medicine since the twenty-ninth.

The mixture was repeated with six grains of the hemlock-pill.

June 4. He did not take his medicine regularly; and was indeed so well as to require none.

June 10. He was in good health. His mother said that he had mended surpris-
ingly, and that he had not hooped for
more than a week.

C A S E IX.

Ann Archer, aged fifteen months, about a fortnight before I saw her, began to be affected with a cough, which, after the first week, terminated in the kinkcough. The fit returned once in two hours, or an hour, and sometimes more frequently, especially if any thing offended her. She vomited in the fit if her stomach was full, but not otherwise. A little phlegm always came into her mouth with coughing; but she often swallowed it. She was very hot, but
did

did not cough so often, in the night. Her breathing was oppressed, and she seemed otherwise uneasy, in her sleep. She had also been subject, for more than a month, to sweat much when asleep. Her pulse was quick. She had two griping greenish stools every day. She had passed a worm since the kinkcough began.

May 23, 1772. I ordered the following mixture to be taken daily, with a gradual addition of the hemlock as usual.

Take of spring water, two ounces and a half; white sugar, a dram and a half; hemlock-mass, one grain: mix them.

May 24. She had a better night, and only hooped twice. The fits were also less frequent, and milder to day. She had a stool last night.

The medicine agreed; was taken regularly; and was repeated to day.

May 25. The fits were more frequent last night, but milder. She was very cheerful to day.

The mixture was repeated.

May 26. She had a good night, and kinked twice. She coughed more to day than yesterday. She continued to sweat in her sleep. She had three slimy stools, and passed a large round worm. She was very cheerful.

The medicine was repeated with two grains of hemlock.

May 27. She had a pretty good night, and sweated much less than usual. Her fits were milder and less frequent. She had one slimy stool.

The same medicine was repeated.

May 28. She had a good night, and sweated none. She coughed less to day. She had two stools without slime.

The mixture was repeated with three grains of the hemlock-mass.

May 29. She was cheerful. She coughed twice in the night, and but seldom to day. She had two loose stools.

The medicine was repeated as yesterday.

May

THE KINK COUGH. 89

May 30. She coughed thrice last night, and several times to day; but did not kink.

The mixture was repeated with the addition of a fourth grain of hemlock.

May 31. She coughed three times last night, and five times to day. She sweated in the night. She had three stools.

The medicine was repeated.

June 1. She coughed twice in the night, and but twice to day. She had a loose stool. She was very lively.

The mixture was repeated with five grains of hemlock.

June 2. The cough was worse; and she was very fretful. A tooth was cutting. She had one stool.

The mixture was repeated.

June 3. She did not cough so often as yesterday. Two teeth were making their way through the gum. She was a little feverish. She had a loose stool.

The medicine was repeated with six grains of hemlock.

June

June 4. She was very fretful and cried much; which made her cough more frequent than yesterday. She was not feverish. She had two slimy stools. The teeth had not yet made their way.

June 5. She had a good night. She had cut three teeth. Her cough was much abated. Her skin was cool. She was very cheerful.

June 10. Her cough continued, but the kink had left her above a week. She sometimes coughed till she was black in the face, and yet did not kink or vomit. Sucking or drinking put away the cough. She was cutting both her eye-teeth, whereof one was almost through the gum. She was hot and feverish in the night. She had taken no medicine for several days past. She had two stools a day.

The mixture was repeated with six grains of the hemlock-mass.

June 11. Her cough was abated. She had one stool. She was very brisk. The medicine was repeated.

June

THE KINKCOUGH. 91

June 12. She rested well. The cough was much less.

The mixture was repeated.

June 13. She was much better in all respects.

The medicine was taken duly.

June 14. She coughed none in the night, and only a little in the morning.

June 15. The cough was almost gone.

June 16. She was in good health; and the mixture was omitted.

CASE X.

John Archer, aged ten years, of a gross, square habit of body, had laboured under the kinkcough since the fifth of April. This disorder began with headach, hoarseness, sore throat, cough, sickness, and voiding of worms by stool. The kink came on after the first fortnight. For the last week or two the disease had been rather on the decline: but he still kinked often. The fits were worst in the night. He expectorated phlegm in the fit; and also

also vomited, if his stomach happened to be full. His throat continued to be a little sore. He was troubled with thirst. His appetite was good. He had two or three stools every day.

May 23. I ordered the following mixture, with the usual directions.

Take of spring water, three ounces; white sugar, a dram and a half; hemlock-mass, five grains: mix them.

May 24. He had a better night. He kinked only twice in the night, and not so often as usual to day. His throat was better. He had one stool. The mixture agreed well, and was repeated.

May 25. He had a pretty good night. He coughed and expectorated less. His throat was well. His appetite was very good. He had one stool, and passed a large round worm.

The mixture was repeated with six grains of the hemlock-mass.

May 26. He had a good night. The fits were less frequent; but he bled at the nose in them this afternoon. He passed two worms, and had one stool.

THE KINKCOUGH. 93

The mixture was repeated.

May 27. He coughed upon first going to bed, but none in the night. His cough was less frequent to-day than yesterday; but he bled at the nose every other coughing fit. He had one stool.

The mixture was repeated with seven grains of hemlock.

May 28. He had a very good night, not having coughed once. The cough was much better to-day. He bled once at the nose. He had a stool.

The mixture was repeated.

May 29. He had a very good night and did not cough. He coughed but three or four times to-day. He bled a little at the nose. He had a stool.

The medicine was repeated.

May 30. He had two slight coughing fits last night, and coughed several times to-day; but seldom kinked. He had two stools.

The mixture was repeated with eight grains of the hemlock-masa.

May 31. He was still better to-day than yesterday. He had three stools.

The

The medicine was repeated.

June 1. He continued to mend. He had one stool.

The medicine was repeated.

June 2. He had a very good night, and continued better.

The mixture was repeated.

June 3. He coughed but once in the night, and twice to-day.

The medicine was repeated with nine grains of hemlock.

June 4. He was so well to-day that the mixture was omitted.

June 10. He continued to cough a little, but had not hooped for a week and more.

CASE XI.

Samuel Archer, aged seven years, and of the same gross square make with his brother, the preceding patient, began, fourteen days before the time of my seeing him, to be affected with headach, hoarseness, sore throat, cough, thirst, and heat. He had kinked mostly every hour for about a week.

THE KINK COUGH. 95

a week. The fits were most violent in the night. He bled at the nose in a bad fit; and, if his stomach happened to be full, he vomited in the fit. He expectorated much phlegm. He was hot when asleep. His breathing was free; his appetite was good; his pulse was quick; and he had three stools a day.

May 23, 1772. The hemlock was ordered in the same dose and manner as for his brother.

May 24. He had a much better night, having had only three fits. He expectorated a great deal of phlegm this morning. He had one stool.

The mixture agreed well; and was repeated.

May 25. He had a pretty good night. He both kinked and expectorated less. He had one loose stool.

The mixture was repeated with six grains of the hemlock-pill.

May 26. He was still better than yesterday. His appetite was good. He had four loose stools, and passed three large worms of the round sort.

The

The mixture was repeated.

May 27. He coughed when he first lay down in bed, and no more all night. He continued better to-day. He had three stools.

The medicine was repeated with seven grains of the hemlock-pill.

May 28. He complained of pain in his belly at times. He continued to mend in other respects.

The mixture was repeated.

May 29. He had a very good night, and did not cough at all. He coughed three or four times to day. He still complained a little of his belly. His appetite was good. He had two loose stools.

The medicine was repeated.

May 30. He had two slight coughing fits in the night. He coughed and vomited several times to-day. He had two stools.

The mixture was repeated with eight grains of hemlock.

May 31. He had three slight coughing fits in the night, and several fits to-day;

THE KINK COUGH. 97

day; and vomited once. He sweated much in the night. His appetite was good. He had six stools and passed six live worms.

The medicine was repeated.

June 1. He coughed twice last night and thrice to day. He was feverish last night and to day. He had a stool with two large worms.

The mixture was repeated with nine grains of hemlock.

June 2. He was not so feverish; and was on the whole better than yesterday. He had two stools.

The mixture was repeated.

June 3. He was much better. He coughed twice in the night. He had a stool with a large round worm in the morning.

The mixture was repeated with ten grains of the hemlock-pill.

June 4. He coughed twice last night, and about six times to day. The pain of his belly was much better. He had two stools.

The mixture was repeated.

H

June

June 5. He had a good night, and coughed but twice to-day.

The mixture was discontinued.

June 10. Three years ago he voided by stool, seven score of large round worms, in the space of three days. He also passed some worms about last Christmas, but none after, till he began with the hemlock. The kinks had left him above a week. He had still a cough; and it occasioned vomiting of phlegm in a morning. The vomiting relieved the cough. He complained of pains in his belly towards night. He was hot and sweated in the night. His pulse was calm. He had two stools every day. He began his medicine again on the eighth, and took it regularly.

The mixture was repeated, with eleven grains of the hemlock-mass.

June 11. He coughed twice last night, and thrice to-day; but hooped none. He vomited his dinner. He had two stools.

The mixture was repeated.

June 12. He rested better. The cough was milder and less frequent. He passed a large worm to-day.

THE KINK COUGH. 99

The mixture was repeated with twelve grains of the hemlock-mass.

June 13. He rested well. The cough was less. He had one stool with a large live worm.

The mixture was repeated with thirteen grains of hemlock.

June 14. His cough was better. He had two stools with one large worm.

The mixture was repeated with fourteen grains of hemlock.

June 15. The cough was less troublesome. He had one stool with a large worm to-day.

The mixture was repeated.

June 16. The cough was very trifling. The pain of his belly was gone. He had two stools.

The mixture was repeated.

June 18. He continued well. He had two stools with one large worm.

The same mixture was repeated.

June 19. He had a stool with a large worm: but as he was now in good health, and as his chief food was brown bread and water (his parents being very

poor) I apprehended that the worms would continue till the cause should be removed, and so his medicine was discontinued.

Mr. Yorke communicated to me the four following cases which occurred to him in his own practice.

CASE XII.

Robert Trussel, aged three years and a half, had laboured under the kinkcough between a fortnight and three weeks. He coughed every hour or half hour, but did not kink above three times in twenty-four hours. He often bled at the nose and mouth. He passed a large round worm a few days ago.

June 10, 1772. A large spoonful of the following mixture was to be given every four hours.

Take of spring water, three ounces;
sugar candy, a dram and a half;
hemlock-mals, three grains: mix
them.

June 11. He had a good night. He coughed about once in three or four hours last night and to day. He once

THE KINK COUGH. 101

brought up a good deal of phlegm. He had one stool, with a worm.

He took the medicine duly; and it was repeated.

June 12. He was restless in the night, but did not cough more than usual. His cough was milder to-day. He had two stools.

The mixture was repeated with four grains of the hemlock-pill.

June 13. He had a better night. The cough was much the same as yesterday; but the whooping was gone. His skin was cool. He had two stools.

The mixture was repeated.

June 14. The cough was much the same. He had two stools.

The mixture was repeated.

June 15. He coughed frequently to-day, and vomited with almost every coughing fit; but still did not kink. His appetite was good; and he eat heartily.

The mixture was repeated, with five grains of the hemlock-pill.

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June 16. He had a good night; and was much better in all respects. The vomiting was gone. He had two stools.

The medicine was repeated.

June 17. He had three fits of coughing in the night, and four to day; and he vomited once. His skin was cool.

The mixture was repeated with six grains of hemlock.

June 18. The cough was much better. He did not vomit. His appetite was good.

The mixture was repeated.

June 19. He continued to mend.

The mixture was repeated, with seven grains of the hemlock-mass.

June 20. He was still better.

The same medicine was repeated.

June 21. He coughed three times; and bled at the nose to day for the first time since he began the hemlock. He had not kinked for the last nine days.

He continued the medicine a few days longer; and was perfectly cured.

CASE

CASE XIII.

Elizabeth Truffel, aged ten months, had been afflicted with the kinkcough ever since the nineteenth day of April. The kinks returned very often, and she generally brought up phlegm with them. She had a stool every day.

June 11. The following mixture was given, so as to be finished in twenty-four hours.

Take of spring water, two ounces; sugar candy, half a dram; hemlock-pill, a grain and a half: mix them.

June 12. She was much the same. She had three stools to day.

She took the medicine regularly, and it was repeated.

June 13. The kinks were milder, and less frequent. Her skin was cool. She had two stools.

The mixture was repeated with two grains of hemlock.

June 14. She coughed more frequently than she kinked. She was in good spirits.

The mixture was repeated.

June 15. Her cough was better last night and to day; and she did not kink. She had three stools.

The medicine was repeated, with three grains of the hemlock-mass.

June 16. She had but two hooping fits in the night; and as many to day. Her appetite was good. She was very cheerful.

The mixture was repeated.

June 17. She coughed once or twice to day; but kinked none. She was pretty well in every respect.

The mixture was discontinued.

CASE XIV.

Mary Green, aged five years, had laboured under the kinkcough for a month. The hooping began in two or three days after the first attack of the disease. Those fits returned almost every hour, and were often attended with vomiting.

Some-

THE KINKCOUGH. 105

Sometimes the kink was so violent that she turned black in the face, became stiff all over, and swooned. She complained always of headach for a minute or two before the kink came on. She was regular as to stools. She had always been weakly; and she was a year and a half old before she took to walking.

June 16. She got three grains of the hemlock-mass in a mixture, which was to be finished in twenty-four hours.

June 17. The mixture was repeated.

June 18. She had much better nights. The fits were milder and less frequent. She vomited none to day.

The mixture was repeated.

June 19. She had a bad night; but was better to-day.

The mixture was repeated, with four grains of the hemlock-pill.

June 20. She vomited none since the seventeenth. She took no medicine yesterday.

The mixture was repeated, with five grains of hemlock.

June

June 23. The kinking fits were milder.

-As the family did not send regularly for the medicine, five grains of the hemlock-mass were mingled with a proper quantity of testaceous powder; six of these powders were sent together; and one was to be finished every twenty-four hours, it being given by little and little.

July 5. They did not send again till to-day: and it was uncertain whether the powders had been properly given. The child having been seized with a very violent hooping fit, insomuch that she became stiff and fainted away, the neighbours were called in as though she had been dead: but, as soon as she seemed to be coming to herself, they sent for a repetition of the powders.

Six more powders were ordered, each containing seven grains of hemlock.

July 11. She was much better in every respect; and had not swooned since last report.

Six powders were repeated.

July

THE KINKCOUGH. 107

July 20. She continued to mend.

Six powders as before were repeated.

August 11. They did not send again till to-day.

Two powders were repeated, each containing eight grains of hemlock-pill.

This child took no more medicine; for though the disease was not cured, yet it was become so slight as to give her little trouble, and her parents no alarm. She never had any swooping fits during the regular use of the hemlock.

CASE XV.

— Ancor (daughter to John Ancor of Thrumpton), aged nine years, was afflicted with a violent kinkcough of more than six weeks standing. The kink began on the fourth day from the first seizure of the disease. It returned above ten times in the day, and nearly as often in the night. It was always preceded by a pain at the upper part of the breast. During the first fortnight she vomited generally in the fit, and brought up
great

great quantities of phlegm; but she did not vomit after. She bled at the nose only three or four times in one day. Her appetite was bad. Her belly was natural. She was of a weakly habit of body.

June 23, 1772. She got the following mixture to be taken as usual.

Take of spring water, three ounces; sugar candy, a dram and a half; hemlock-pill, six grains: mix them.

June 24. Her medicine had been taken regularly, and repeated daily; and with an extraordinary good effect, for the kinks were greatly abated.

The same method was continued.

June 27. The kink was gone; but she still coughed. She took her mixture regularly.

July 4. The cough was gone, and she was in every respect in good health.

The medicine, which had hitherto been continued regularly, was omitted.

Mr.

THE KINKCOUGH. 109

Mr. John Smith, surgeon in Uttoxeter, to whom I have already acknowledged my obligations, informs me, that towards the end of last year he cured three children afflicted with the kinkcough, by my method; and that the cure of each was compleated in three weeks.

The kinkcough being epidemick in Derby this current year, 1773, I sought out for some patients, that I might finally establish the excellence of hemlock, as a cure for this disease. I give the whole of these cases, as usual, to the reader, without selection, and according to the order of time in which I treated them.

CASE XVI.

Thomas Newdale, aged four years, of a florid complexion, and delicate, though healthy habit, laboured under the kinkcough. The cough began three weeks before I saw him; and he had been troubled with the kinks or whooping fits for a fortnight of that time. The fit returned every hour, and he had bled often at the nose in it; but none for the last two days.

days. He vomited in the fits, especially if his stomach was full; and he discharged a great deal of phlegm both by expectoration and vomition. He knew when the fit was to come on by a particular sensation in his throat. He then cried out to have his head held; and the fit was sometimes so violent, as to raise him, thus held, from off the ground. His breathing was free, and his spirits were good in the intervals. His appetite was bad. His belly was natural.

February 21. I ordered a large spoonful of the following mixture to be taken every four hours, always shaking the bottle first.

Take of spring water, three ounces; white sugar, a dram and a half; hemlock-mass, two grains: mix them.

February 22. He had a better night than usual. The fits were less violent and scarce so frequent. His pulse beat a hundred and twelve strokes in the minute this evening. He had one stool.

The

THE KINKCOUGH. 311

The mixture was repeated with four grains of hemlock.

February 23. He rested well in the night, and had a better day than usual. He had eleven fits during the last twenty-four hours, and vomited only in one of them. They were all milder and shorter. He was very playful in the intervals. His breathing was a little affected; and his pulse beat a hundred and twelve times in the minute this evening. His appetite was better. He had one slimy stool.

The mixture was repeated with five grains of the hemlock-pill.

February 24. He was better in every respect since yesterday. His pulse beat a hundred and seventeen strokes in the minute this night. His skin was cool. He had no thirst. The urine was without colour or sediment. He had one stool.

The mixture was repeated with six grains of the hemlock-mass.

February 25, at night. He had only ten fits since last report. He expectorated
in

in all of them, vomited in one, and bled a few drops at the nose in another. He had no stool. He took his medicine regularly.

The mixture was repeated with seven grains of hemlock, and a scruple of magnesia.

February 26. He had only nine mild fits, and vomited in none of them. His pulse beat a hundred and twenty strokes in the minute this night. His skin was cool. He had no thirst. His appetite continued to mend. His urine was colourless and without sediment. He had a large stool. He was very playful.

The mixture was repeated with eight grains of the hemlock-pill and forty of magnesia.

February 27, at night. He had five slight kinks since last report; and vomited a good deal of phlegm in two of them. He had one stool.

The mixture was repeated with eight grains of hemlock and a dram of magnesia.

Febru-

THE KINKCOUGH. 113

February 28, at night. He rested very well in the night, and had a good day. He had eight fits of coughing without either hooping or vomiting. He looked better. He had one loose stool.

The mixture was repeated.

March 1. He continued to mend. He kinked but once, and the cough was milder. He vomited once, and always expectorated a little phlegm with the cough. His pulse beat a hundred and twelve strokes in the minute to-night. He had five stools.

The mixture was repeated without magnesia.

March 2, at night. He had nine simple fits of coughing since last report. His water was very pale, with a little very light white sediment. He had two stools.

The mixture was repeated with nine grains of the hemlock-mass.

March 3, at night. He was very cheerful and well. He never kinked. He coughed but once in the night, and

I

the

the coughing bouts to-day were mostly from laughing, crying, or romping. The urine was as usual. He had one stool.

The mixture was repeated.

March 4. He coughed twice in the night, and several times to-day, but mostly from accidental causes. He never kinked or vomited. He had one stool.

The mixture was repeated with ten grains of the hemlock-mass.

March 5. He had many flight fits of coughing. His urine continued pale. He had one stool.

The mixture was repeated.

March 6. He coughed several times, and kinked twice. He generally expectorated a little phlegm; but never vomited. He had one costive stool.

The mixture was repeated with eleven grains of hemlock and twenty of polychrest salt.

March 7, at night. He had eight simple fits of coughing since the last report. He had two stools.

The

THE KINKCOUGH. 115

The mixture was repeated with twelve grains of hemlock and as much polychrest salt.

March 8, at night. He had twelve fits of coughing since last report, kinked in several of them, and vomited in three. His urine was pale with a little very light white sediment. He had no stool. It appeared that he had been permitted to go out of doors constantly for a week past, as if he had been in perfect health.

He was ordered to be confined to the house; and the mixture was repeated with twelve grains of hemlock and thirty of polychrest salt.

March 9, at night. He coughed ten times, but neither kinked nor vomited, during the last twenty-four hours. His urine was of a milky colour. He had three loose stools.

The mixture was repeated as yesterday.

March 10, at night. He had twelve simple fits of coughing since the last report. His skin was cool. His pulse was calm. His water was very limpid, with scarce any sediment. He had one stool.

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The same mixture was repeated with an additional grain of hemlock.

March 11, at night. His cough was much the same. His pulse beat eighty strokes in the minute. His urine was without colour, and without sediment. He had an easy stool. He got flesh and strength.

The mixture was repeated with fourteen grains of hemlock and two scruples of polychrest salt.

March 12. He was in good health. He never kinked, and seldom coughed. He had three stools.

The mixture was omitted.

March 14. He coughed but once in the night, and very little to-day.

March 19. He continued very well, never coughing in the night, and very seldom in the day; notwithstanding that he had gone out and in, without restraint, and eat and drank, as when in his best health, for a week past.

CASE XVII.

Mary Hele, aged two years and a half, on the twenty-second of March began to be

THE KINK COUGH. 117

be feverish, having been before pretty well, except as to a short cough of a fortnight's standing. The small-pox appeared in a few days after the fever began, and turned out a very distinct good sort. The cough, on the seventh day of the eruption, terminated in the kinkcough; which disorder still continued. The kink returned sometimes once, and sometimes three or four times in an hour. She generally vomited in the kink. Her breathing was always much oppressed, and was attended with a panting noise. Her belly was full and hard. She had very bad nights, and started and cried in her sleep.—She also laboured under a quotidian ague, of which this was the fourteenth day. She was very thirsty during the fever. She had no appetite. She had sometimes two or three stools in the day, and sometimes only one. Her flesh and strength were much exhausted.

February 21, at night, I ordered two tea-spoonfuls of the following mixture

I 3

to

to be given every three hours, first shaking the glass.

Take of spring water, two ounces; white sugar, a dram; hemlock-mass, a grain and a half: mix them,

February 22. She had a very bad night. The ague-fit came on half an hour after eleven to-day. She shook violently till noon; the fever lasted till four in the afternoon; and was milder: she sweated scarce any but on her feet. She kinked but once during the fever. Her breathing was quite free this evening. Her pulse was still quick. She had two stools, whereof the last was very slimy. She was a little cheerful. She did not begin the mixture till seven in the morning, and it was now done.

The mixture was repeated with two grains of hemlock.

February 23. Her night had been as usual. The kinks returned oftener than once in the hour, but were shorter. She vomited much phlegm in two of them. The ague came on about one o'clock, and

and was just such a fit as she had yesterday. She was very cheerful to-day both before and after the fever, and took her food with an appetite. Her breathing was free and her skin was cool this evening. The urine, made in the morning, was high coloured, and deposited a sediment. She had two stools, which were rather costive. She took her medicine regularly.

The mixture was repeated with two grains and a half of the hemlock-mass.

February 24. She rested better last night than she had done any night these three weeks, having slept for two hours at a time, and without either screaming or starting. She had thirteen kinks, beside two accidental ones, since last report; and vomited but in one. The ague-fit began a little before noon, lasted till four, and was a good deal milder. She drank none, and slept half an hour during the fever. She was asleep to-night, and breathed easily. Her pulse beat a hundred and twelve strokes in the minute. She had a black stool.

The mixture was repeated with three grains of the hemlock-mass.

February 25. She had a good night, having slept calmly for an hour at a time. She had eleven kinks since last report; beside an accidental one, which ended in vomiting of phlegm. The fever began a little after eleven to-day. The cold fit lasted near an hour, and was attended for the first time with a tremor, instead of the usual violent agitations. She was hot most of the afternoon. Her appetite was good, and she had eaten heartily to-day. She had one very yellow slimy loose stool. She had been cheerful this evening, and was now asleep. Her breathing was free; her pulse was calm; her skin was cool, and her belly was soft.

The mixture was repeated with three grains of hemlock and fifteen of magnesia.

February 26. She had twenty kinks since last report; whereof six were about midnight, in the space of three hours.

She

THE KINKCOUGH, 121

She slept a little after two in the morning. The ague-fit began at noon, was mild, and lasted the usual time. She had only one kink during the fever, but they came thick after. She had two yellow slimy loose stools. She had been very cheerful in the absence of fever this day; but she was peevish to-night. She overloaded her stomach with improper food yesterday.

The mixture was repeated with an additional half grain of hemlock.

February 27. She had several fits of coughing, but kinked only in two of them. She slept very well in the night between the fits. She had the fever as usual to-day. She vomited much less phlegm, and scarce ever her food, for some days. Her appetite was more moderate, since she had eaten so voraciously. She had three yellow very slimy and loose stools. Her pulse beat a hundred and twelve strokes in the minute to-night. She was asleep, and breathed easily.

The same mixture was repeated with four grains of the hemlock-mass.

Febru-

February 28. She rested very well in the night. She had many coughing bouts, and some of them from passion. She had only three kinks beside an accidental one. The fever-fit diminished daily. She had four large yellow slimy stools. She was very cheerful this evening.

The same mixture was repeated, with only eight grains of magnesia.

March 1. She rested pretty well in the night. She had seven kinks, beside simple fits of coughing, since the last report. The fever continued to lessen, and she sweated all over to-day. She had two stools of a more natural appearance. Her pulse was firm, regular, and beat a hundred and four strokes in the minute to-night. She was asleep, and breathed freely. She sweated with every dose of the mixture.

The same mixture was repeated with ten grains of nitre instead of magnesia.

March 2. She had eight slight kinks, beside one or two accidental ones. She had only two during the fever; whereof one

was

THE KINKCOUGH. 123

was in the cold fit. Her feet were observed to swell to-night for the first time. She vomited her supper. She was very morose. She had no thirst, and very little appetite. She made water plentifully. She had one stool. The medicine did not now make her sweat.

The mixture was repeated as yesterday.

March 3. She had a good night. She had fourteen very slight kinks; and vomited a little phlegm in one of them. The fever was much milder and shorter, and she sweated in it. She had a bloated appearance during the fever. She made a great deal of water. She had a loose stool of a dark colour resembling the medicine. She had been cheerful this evening; and was fast asleep. Her skin was cool. Her pulse beat a hundred and four times in the minute.

The same mixture was repeated with an additional half grain of hemlock.

March 4. She had eight very mild kinks. The fever was inconsiderable to-day. She had a dark stool without slime.

She

She was very peevish and looked rather bloated to-night.

The mixture was repeated with ten grains of polychrest salt instead of nitre.

March 5. She was hot, peevish and restless a good part of the night, but she became cool and slept tolerably after. She both kinked and coughed several times, but never vomited. She had little or no cold fit to-day. She continued cheerful after the fever till she fell asleep this evening. She had two stools.

The mixture was repeated, with five grains of hemlock and ten of nitre, instead of polychrest salt.

March 6. She had a very good night. She had four mild kinks, and about as many simple coughing fits. The fever was so slight that she chose to sit up the whole time of it. She was very cheerful almost all day; and exerted her spirits beyond measure. She had two loose stools without slime, but still coloured, as with the medicine.

The

THE KINKCOUGH. 125

The mixture was repeated as yesterday.

March 7. She was very restless and hot till past midnight; but slept pretty well after. She had no fever to day. She had ten slight kinks since last report; but most of them were accidental. She had one small stool. She was amazingly morose this evening, and was so from nature.

The mixture was repeated, with a sixth grain of hemlock.

March 8. She was hot, fretful, and restless last night, till a sweat came on, when she fell asleep, and did not awake for seven hours. She had several simple coughing bouts, but kinked only from accident. She had three natural stools. She had been very cheerful and cool all day, and was so to-night.

The mixture was repeated as yesterday.

March 9. She rested very well, was cool all night, and sweated none. She had eleven slight kinks. She was cool

to

to night, and had been so all day. She had a small stool.

The mixture was repeated, with seven grains of hemlock, and ten of polychrest salt, instead of nitre.

March 10. She had eleven mild kinks, besides simple fits of coughing. She was seized with swelling of her face and limbs, and coldness, about one o'clock to-day: a hot fit succeeded the coldness, and terminated in a gentle sweat, which carried off the swelling fast; and there were no remains of it to-night. She made a great deal of water towards the end of the fever. She had a stool of the usual colour, but without slime.

The mixture was repeated with seven grains of hemlock, and twelve of polychrest salt.

March 11. She slept well in the night; and had a good day. She had six mild kinks, beside coughing fits. She made a great deal of water. She had three stools of a natural appearance. She was very cheerful to-night.

The

The mixture was repeated with seven grains and a half of hemlock without the salt.

March 12. Her cough was much the same. She had another ague-fit, with bloatedness. It began soon after noon; and the swelling was off before five. She made a great deal of water. She had four stools of a natural appearance. The stools relieved her cough much, especially the last, which was about six in the morning.

A waistcoat, in which were quilted two ounces and a half of peruvian bark, according to Doctor Pye's method, was put on the child's naked body: and the mixture was repeated as yesterday.

March 13. She had a pretty good night, having slept for two hours at a time. The kinks were rather more frequent. She had one large stool. She was asleep this evening. Her skin was cool. Her pulse was quick.

The mixture was repeated.

March 14. She rested very well in the

the night, and sweated in the beginning of it. She had a mild fever-fit to day. She had one stool. She was asleep this evening.

The mixture was repeated, with eight grains of the hemlock-mass.

March 15. She had a good night, and likewise a very good day. The kink was gone; and the cough was mostly from passion. She had two natural stools.

The mixture was repeated.

March 16. She had a very good night. The ague fit began at eleven, and lasted till near four; but was very slight. Her cough was less frequent. She had three large natural stools.

The mixture was repeated.

March 17. She rested well: and had a very good day. The cough was trifling. She had one stool.

The mixture was repeated.

March 18. She had a very good night. The fever was very gentle to-day. She coughed little or none, but
from

THE KINK COUGH. 129

from passion. She had a large stool. For the last three days she took her mixture only in the day; but always finished it.

The mixture was repeated.

March 19. She slept well in the night, and had a very good day. She coughed very little. She had two natural stools.

The mixture was repeated.

March 20. She had a very good night. The fever did not last two hours to day. The cough was trifling. She had two natural stools.

The mixture was repeated.

March 21. She had above fifteen stools, with tenesmus, and sometimes a coming down of the body, since last report. Some of the stools had a purulent appearance, and were streaked with blood. She was very restless through the day. She vomited her food about noon.

The mixture, of which she had taken but one dose, was omitted in the morning; and she got three drops of laudanum. She got the same number of drops again

to night: and they were to be repeated in the morning, if the looseness should continue.

March 22. She rested tolerably last night, and sweated when asleep. She had no fever-fit to day. She had fifteen stools; whereof some were slimy, and two or three resembled matter, with streaks of blood. She was asleep this night; she breathed very easily; and her skin was cool.

She took the drops in the morning; and they were repeated to night.

March 23. She rested very well in the night. She had eleven stools: some of them were slimy, but none had a purulent appearance. She had no complaint, but the looseness. She took no drops till five this evening; and she slept afterwards till eight.

March 24. She slept very well last night, and did not cough once. Her cough was now merely accidental. She was very cheerful to day; and walked round the room with help. She had

THE KINKCOUGH. 131

had six stools of a very good appearance. Her stools never had any unusual smell during the looseness. She was asleep this night.—She took four drops of laudanum in the morning.

March 25. She was free from complaints. She had two natural stools in the morning; and then got four drops of laudanum.

March 26. She slept very well in the night. She had two natural stools. She was in good health. She took no medicine since yesterday morning.

March 29. She was in good health; had a great appetite; and got flesh and strength fast.

April 3. She was much improved in flesh and strength, and was very lively and well.

C A S E XVIII.

William Toplis, aged five years, had been troubled, for the three last weeks, with a cough which in all respects resembled the kinkcough, except that he did

not kink. The coughing fit returned every hour and a half, or every two hours, and sometimes even four or five times in an hour. He discharged much phlegm, both by coughing and vomiting. He likewise vomited almost whatever he took. He picked his nose, grated his teeth, started, and shrieked in his sleep. He was thirsty. His tongue was moist. He had a small, but frequent appetite. His pulse was small and quick. The cough had all along been attended with a looseness; and he had four or five very loose stools daily. His belly was large, but not hard. His habit of body was much extenuated. He was naturally quiet and spiritless; which disposition was increased by his complaints.

February 25. I ordered a spoonful of the following mixture to be taken every four hours.

Take of spring water, three ounces;
white sugar, a dram and a half;
hemlock-mass, three grains: mix
them.

February

THE KINKCOUGH. 133

February 26. He had but one stool.

The mixture was repeated with an additional half grain of hemlock.

February 27. He had a restless night, having slept little till towards morning. His cough was milder, and less frequent. His pulse was small, and beat a hundred and twenty strokes in the minute to night. His skin was hot. His urine was pale, and without sediment. He had no stool.

The mixture was repeated, with a scruple of magnesia.

February 28. He rested tolerably in the night. He coughed often, and vomited a good deal of phlegm, to day. His skin was hot, and his pulse was quick this evening. He had four loose stools.

The mixture was repeated without magnesia.

March 1. He had coughed often to day; and he vomited his supper; his pulse beat a hundred and twenty six strokes in the minute. His urine deposited a copious sediment. He had no stool.

The hemlock-mixture was repeated with fifteen grains of nitre.

March 2. He rested better in the night, and had a better day. The cough and vomiting were abated. He complained of pain in his belly at times. His urine still deposited a heavy sediment. He had one stool.

The mixture was repeated, containing four grains of hemlock, and fifteen of nitre.

March 3. He had a pretty good night, and also a better day than usual. He coughed less frequently, but with more violence; and I observed him to kink to day, which his friends said, was the first time. He vomited very seldom. The pain of his belly continued troublesome at times. He had no stool. He was asleep late this night, and his pulse beat a hundred and twenty eight strokes in the minute.

The mixture was repeated, with four grains and a half of hemlock, fifteen of nitre, and twenty of magnesia.

March 4. He was low spirited. His cough was better; but he kinked sometimes.

times. His belly continued large, but was not hard, nor painful to the touch. His urine was not high coloured. He had no stool.

A spoonful of a three ounce solution, containing two scruples of polychrest salt, was to be given every four hours.

March 5. He had been spiritless all day, continuing in bed, and saying little; but asking for cold water to drink, which was not denied him. He had a stool in the night, and a small one in the morning; beside fruitless motions to stool through the day. His pulse was quick and small.

A quarter of an ounce of common salt dissolved in half a pint of water was ordered immediately for a glyster.

A solution of a scruple of nitre in three ounces of water sweetened, was given by spoonfuls in the usual manner.

March 6. He had a better night. He kinked thrice; and coughed often besides. He vomited a great deal of phlegm three different times. He had seven stools since

last report; whereof the first was costive, the rest were slimy, and three were small. He was this night cooler, and more cheerful.

The hemlock-mixture was repeated, containing five grains of the mass.

March 7. He had a very good night. He kinked thrice, and vomited phlegm once. He never vomited his food. He had two stools. His skin was cooler. His pulse was still a little quick. He was asleep this morning. He had eight fits of coughing through the day, and kinked in most of them, but did not vomit. He had four small yellow slimy stools. He was still much less feverish this night.

The mixture was repeated, with six grains of hemlock-mass.

March 8. He had a good night, and kinked twice. He had two slimy stools. His pulse was quick this morning. He was very easy, and coughed a little, but kinked none, through the day. He was neither affected with thirst, sickness, nor vomiting,

THE KINK COUGH. 137

vomiting. His pulse was still quick. He had four small slimy very loose stools.

The mixture was repeated.

March 9. He had a good night; though he had started often, and talked a good deal in his sleep. He coughed a little, but never kinked. He had five small very loose stools, with tenesmus, and passed a live worm of the round kind. His belly was less. His pulse was still quick. His skin was warmer than natural. He was cheerful this evening.

The mixture was repeated.

March 10. He rested well. He had one slight kink in the night, but none since. He had a pretty good day. He was not thirsty. His appetite was rather better. He had three loose stools. His pulse was still quick. He was more cheerful this evening.

The mixture was repeated, with seven grains of hemlock.

March 11. He had a pretty good day, and was more lively. He coughed a little, but without expectoration; and neither
kinked

kinked nor vomited. He complained of some pain in his head and belly. His pulse was still quick. He was not thirsty. His appetite continued rather better. He had three small loose stools.

The mixture was repeated, with eight grains of the hemlock-mass.

Next day, he had only one slimy stool; which was obtained by a glyster. He got no more of the hemlock, as the kink-cough was cured.

The cure of this boy's other complaints was attempted by the peruvian bark, and other cordial antiseptick means, together with vermifuge medicines, and small doses of rhubarb: but in vain; for he died on the thirtieth of the same month. He passed but one other worm, and it was dead. His stools continued offensive, and unnatural in their appearance, to the last.

C A S E XIX.

Mary Langly, aged ten weeks, was subject to a cough of a fortnight's standing,

ing, which returned very often, and in fits, like the kinkcough; though she had never been observed to kink. The cough was often so violent as to make her black in the face. She discharged much phlegm, both by expectoration, and vomition. Her belly was full and hard. She was often chilly and hot by turns. She started, and moaned in her sleep. She was very fretful. Her pulse beat a hundred and twenty-six strokes in the minute, when she was asleep. She laboured under a looseness of the same continuance with the cough: and she had four or five slimy stools in the day, for she never had any in the night. She was suckled by her mother, who was afflicted with epileptick fits.

February 25. I ordered a tea spoonful of the following mixture to be given every three hours, first shaking the glass.

Take of spring water, an ounce;
white sugar, half a dram; hemlock-mass, half a grain: mix them.

February 26. She had two stools. She took her medicine regularly.

The

The mixture was repeated, with a grain of hemlock.

February 27. Her cough was much the same; but she did not vomit with it. Her belly was softer. She had no stool.

The mixture was repeated, with an addition of five grains of magnesia.

February 28. She coughed often, and was very restless to day. She had two loose stools.

The mixture was repeated, with only half a grain of hemlock, and without the magnesia.

March 1. The cough was much the same. She had two stools. She was very cheerful.

The mixture was repeated as yesterday.

March 2. She had a pretty good night. She coughed a great deal to day. She had three yellow slimy stools.

The mixture was repeated, with a grain of hemlock.

March 3. She coughed and vomited very much, and had little or no rest. She

THE KINK COUGH. 141

She sucked very well. She had two stools.

The mixture was repeated, with half a grain of hemlock, and five grains of nitre.

March 4. She was worse than ever; for though she did not kink, she coughed violently, and sometimes three or four times in the half hour, and always voided both stool and urine at the same time.

The mixture was repeated, with one grain of hemlock, and without nitre.

March 5. She had a better night. She kinked once in the night, and thrice after. She still had frequent and violent fits of coughing; but they were neither so violent, nor so frequent, as yesterday. She sometimes voided both urine and stool in the fits. She was very cheerful in the intervals of coughing. She was fond of the mixture.

The mixture was repeated, with a grain and a half of the hemlock mass.

March 6. She rested about an hour in the night, and a little to day. She kinked once in the night, and four times
I after.

after. The fits of coughing were less frequent; but some of them were more violent than ever, lasting two or three minutes. She became rigid, and swooned, in one of the kinks. She had two stools; whereof one was in a simple coughing fit.

The mixture was repeated with two grains of hemlock.

March 7. She rested better last night. She had five and twenty fits of coughing: she kinked in nineteen of them, and vomited in two. She was very cheerful in the intervals. Her skin was cool. Her pulse was natural this evening. She had no stool.—It appeared that she was often carried out of doors.

The mixture was repeated, with two grains and a half of hemlock, and five of magnesia.

March 8. She had a very good night, having slept for two hours together. She had nine kinks, beside slight fits of coughing; and vomited in three of them, her stomach having been full each time. One kink was very violent; but she did not

THE KINKCOUGH. 143

not swoon with it. She had three very slimy stools. Her skin was cool, and she was very cheerful to night.

The mixture was repeated, with an additional half grain of the hemlock-mass.

March 9. She rested very well in the night. She had eleven mild kinks; and vomited once: she was cheerful in the intervals. She had many griping slimy stools. Her skin was cool to night.

The mixture was repeated without magnesia.

March 10. Her night was very good. She had fourteen kinks, and vomited her milk with a good deal of phlegm in three of them. She had one loose slimy stool. She was very cheerful to night; and had been so, at times, all day.

The mixture was repeated with the magnesia.

March 11. She had a good night. She kinked thrice in the night, and sixteen times after. She vomited twice. She had two slimy stools. Her skin was cool, and she was this night very cheerful.

The

The mixture was repeated, with another half grain of hemlock.

March 12. She had fourteen slight kinks; and was cheerful in the intervals. She vomited in one of the fits, and had a stool in another. She had two slimy stools in all. She was abroad to night.

The mixture was repeated, with four grains of the hemlock-mass.

March 13. She had a pretty good night. She had three kinks in the night, and eleven after. She did not vomit. She had two slimy stools. She had been out of doors to day.

The mixture was repeated.

March 14. She had not so good a night; but she rested pretty well to day. She had thirteen mild kinks, and never vomited. She had one stool. She was very lively this night.

The mixture was repeated.

March 15. She was restless in the night. She kinked fourteen times, since last report, without vomiting. She sometimes vomited her milk, as children commonly do. She had two stools.

The

THE KINKCOUGH. 145

The mixture was repeated, with other five grains of magnesia.

March 16. She had a pretty good night. She had thirteen kinks. She had no stool. She was very cheerful this evening.

The mixture was repeated with an additional half grain of hemlock.

March 17. She had a good night. She had fourteen mild kinks. She was often very fretful. She had four stools. She was asleep this evening.

The mixture was repeated with less hemlock, by half a grain.

March 18. She had a pretty good night. She kinked fourteen times. She had four stools. She continued to be very fretful at times; and seemed as though she was hurt by something. Her navel had always been too big: it was as large as a-nutmeg, and soft; but was said to be sometimes hard.

The belly was ordered to be swathed with a flannel roller.

The mixture was repeated with four

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grains

grains and a half of hemlock, and only five of magnesia.

March 19. She rested well in the night. She had eight mild kinks. She had three stools; whereof one only was slimy. She was very cheerful this night; and had been so through the whole day.

The mixture was repeated.

March 20. She had a very good night. She kinked six times. She had five stools. She was very lively, and improved in flesh, strength, and colour.

The mixture was repeated, with five grains of the hemlock-mass, and four of magnesia.

March 21. She rested very well in the night. She had eleven kinks, and vomited in three of them. She had four stools.

The hemlock mixture was repeated, with three grains of magnesia.

March 22. She rested well, and had but one kink in the night, and five very slight ones after. The vomiting was gone. She had three stools.

The mixture was repeated.

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March 23. She had a very good nights
She had four mild kinks; and as many
stools.

The mixture was repeated.

March 24. She had two very slight
kinks in the night, and none after. She
coughed seldom but from fretfulness.
She had three stools. She was very lively
this evening.

The mixture was repeated.

March 25. She was in good health
and spirits. The kink was gone; and
she never coughed but from passion. She
had three stools.

The mixture was repeated.

March 26. She was very well. She
had three stools.

The mixture was repeated for the last
time.

March 29. She was cheerful, plump,
and free from all complaints.

C A S E XX.

Sarah Wadle, aged two years and four
months, was tolerably healthy till about a
year ago, when she took to eating sand as
often as she could meet with it; and did eat

a great deal before proper means were used to keep her from it. Ever since that time her complexion hath been pale, though it was never very fresh; her belly hath been large and hard; and her appetite hath been very unequal, being for a month or two voracious, and for as long very bad, in mutual succession.

During the loss of appetite, she is distressed with unquenchable thirst, and drinks all the liquids she can get. These complaints have almost without interruption been attended with a looseness: and the stools have generally been unnatural in their appearance, and very offensive. Her flesh and strength have gone and come with her appetite; though she hath all along been rather losing ground in these respects. She has for these two months been subject to profuse sweats in the night.

About a month ago she was seized with a cough and difficulty of breathing, which within a fortnight terminated in the kinkcough. The dyspnoea is constant: walking increases it much, and will at any

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any time bring on the kink. This is very violent, and returns oftener than once in the hour. She complains of pain in her belly, generally vomits phlegm, and often voids her urine involuntarily in the kink. She frequently desires to go to sleep, as soon as the kink is over. She mostly vomits her food. She is very thirsty. Her appetite is pretty good. Her skin is hot. Her pulse is calm. Her flesh and strength are greatly exhausted since the cough began.

April 18. The following mixture is ordered to be taken by spoonfuls in the usual time.

Take of spring water, two ounces;
hemlock pill one grain; white
sugar, a dram: mix them.

April 19. She was very restless in the night. Her breathing is very short both when she is asleep and awake. She hath had six slimy stools mixed with skinney fragments.

The mixture is repeated.

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April

April 20. She sweated much less in the night. She hath had twenty-two kinks since the last report; and they are milder and shorter. She vomited but once. She hath had six darkish loose stools; whereof one was in a fit. Her breathing is more free to night. Her skin is still hot.

The mixture is repeated with two grains of the hemlock mass.

April 21. She slept five hours together last night. The kinks are much milder, and she hath had but fourteen in all. She hath had three loose stools. Her skin is cooler, her breathing continues better, and she is very chearful this evening.

The mixture is repeated.

April 22. She hath kinked two and twenty times, and vomited twice. She hath had three stools. She is very chearful to night.

The mixture is repeated with three grains of the hemlock.

April 23. She hath had fifteen kinks, and vomited with four of them. She hath

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hath had three watery stools. She is very playful to night.

The mixture is repeated.

April 24. She hath kinked sixteen times, and vomited phlegm seven times. She hath had seven very stinking loose stools; whereof two or three passed involuntarily during the kinks. Her breathing is short. Her appetite is bad.

The mixture is repeated.

April 25. She hath had a tolerable night, and hath slept some to day. She did not sweat in the night. She hath kinked thirteen times, and vomited seven times. She is very dry; and hath no appetite. She hath had eight very loose stools.

The mixture is repeated with four grains of the hemlock mass.

April 26. She hath had a good night. She hath had eleven kinks, and vomited a little phlegm in six of them. She never sweats. Her appetite is rather better. She hath had five very small thin stools. She hath been all this day chearful and cool.

The mixture is repeated with four grains and a half of hemlock.

April 27. She hath had eight kinks, and three simple fits of coughing. She hath expectorated a great deal of phlegm, and vomited twice. She breathes freely. Her appetite is very good. She hath had five stools, whereof one was rather costive. She gains flesh and strength.

The mixture is repeated with five grains of the hemlock mass.

April 28. She rested very well in the night, and slept three hours to day. She hath had eight kinks, and vomited with four of them. Walking about does not bring on the fit, nor does she complain of pain in her belly during the fit, for these last two days. Her belly is much softer. She hath had five stools of a more natural appearance. She hath been very chearful and cool all day. She is asleep this evening, and breathes easily.

The mixture is repeated with an additional half grain of hemlock.

April 29. She hath had a very good night. She hath kinked eight times, and
vomited

THE KINKCOUGH. 153

vomited none. Her appetite is good. Her urine is of a pale straw colour with a very light white sediment. She hath had three loose stools.

The mixture is repeated with six grains of the hemlock pill.

April 30. She rested very well in the night. She hath had six fits of coughing, and kinked in four of them. Each of the simple coughing fits ended in vomiting of phlegm. She is still thirsty. Her appetite is good. She hath had five stools, whereof three were not very loose.

The mixture is repeated with seven grains of hemlock.

May 1. She hath kinked four times without vomiting. She hath had two stools; and neither were very loose. She is very playful.

The mixture is repeated.

May 2. She hath kinked six times, and never vomited. She hath very little thirst. She hath had four stools.

The mixture is repeated with eight grains of the hemlock mass.

May

May 3. She hath kinked five times. Her appetite is good. She hath had five stools.

The mixture is repeated with nine grains of hemlock.

May 4. She hath kinked six times, and vomited twice. She hath had five loose stools. She is very chearful and well to night.

The mixture is repeated.

May 5. She eats and sleeps well; and is generally very playful through the day. She hath had six kinks, and vomited in three of them. She hath had five stools; whereof three were not loose.

The mixture is repeated with ten grains of the hemlock mass.

May 6. She hath kinked six times, and vomited thrice. She hath had four small stools; and only one of them was loose.

The mixture is repeated.

May 7. She hath had five kinks, and vomited with three of them. She hath had four small stools of a dark colour but

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but not loose. She is this night very chearful and well.

The mixture is repeated.

May 8. She hath kinked four times, and vomited once. She hath had four very dark stools; and two of them were not loose.

The mixture is repeated with eleven grains of the hemlock mass.

May 9. She hath kinked thrice, and vomited once. She hath had four loose stools. She gets flesh and strength fast, and hath now a better complexion than ever.

The mixture is repeated.

May 10. She hath had two kinks, and vomited in one of them, her stomach having been full. She hath had three very small stools of a good colour and not loose.

The mixture is repeated with twelve grains of hemlock.

May 11. She hath had several coughing bouts, kinked in two of them, and vomited in one of these. She hath had three stools, and none of them were loose.

The

The mixture is repeated.

May 12. She hath kinked twice without vomiting. She hath had four small loose stools.

The mixture is repeated with thirteen grains of the hemlock pill.

May 13. She hath kinked once. She hath had two natural stools. She is plump, strong, and very playful.

The mixture is repeated.

May 14. She hath had one slight kink, and three loose stools. For this last week she hath been able to rise from off the ground; which she never could do before since she had the notion of attempting it.

The mixture is repeated with fourteen grains of hemlock.

May 17. She hath had only three accidental kinks since last report. Her belly is quite soft and reduced to a natural size. Her stools are not loose, and much less frequent.

She continues the mixture regularly.

May 19. She hath kinked none these two days; and is in perfect health.

She

THE KINKCOUGH. 157

She continues her mixture with fifteen grains of hemlock.

May 24. She is in good health. Her stools are of a natural appearance; and she hath never more than two, and sometimes but one in the day.

She continues her mixture.

June 3. She hath had no complaint since last report. She is in perfect health: and her parents say that she was never so well before.—The mixture was taken duly till the thirtyeth; when it was discontinued. She had all along been very fond of the mixture.

BEFORE I close this chapter, it will be necessary to make a few remarks, tending to explain some circumstances in the preceding cases; and which will pave the way for such inferences as are afterward to be deduced from the whole.

The cure of the patient, case fifth, though seemingly tedious, yet, every thing considered, is as remarkable as any of the rest; and is greatly in favour
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of hemlock. Whatever is there said of that medicine is *at least true*; for it is extracted mostly from the accounts of an anxious parent, who was always in fear of the worst. To the same cause ought to be attributed a timid use of the medicine. So that, upon the whole, it appears that hemlock saved the life of this infant; and that the cure might have been sooner accomplished by a freer use not only of hemlock, but of the laxative.

Both Mr. Yorke and I are convinced that each of the six patients, which I had at Kegworth were cured in a week's time: though when I visited them on the tenth of June, I chose to use a less precise expression, as being delivered to me by the parents themselves, that there might not be the smallest room for mistake or imposition.

Though Mary Green took her medicine very irregularly, at least with considerable interruptions; yet I thought proper to insert her case, as the kink sometimes ended in swooning and general rigidity; and as these symptoms never
came

came on during the regular use of the hemlock.

I must likewise observe, that I saw all the four patients that were cured by Mr. Yorke, and some of them before they were well, and I enquired very minutely into their several symptoms, and this was only that I might have every possible testimony for facts which I desired to deliver to the world with the utmost consciousness of their reality.

Thomas Newdale was cured of his disease in less than a week; and of a relapse in still shorter time: so that he was twice cured, and restored to perfect health in the space of a fortnight.

Mary Hele suffered many hardships in the progress of her cure from a cold habitation and improper food; but the greatest hardship was, that, after she had been entirely freed from complaints and was recovering her flesh and strength fast, her friends, contrary to my strict injunctions, and very soon after I left her, stripped her of the
quilted

quilted waistcoat which was made at my expence, carried her out of doors, and treated her in every respect as though she had never been ill: the consequence of all which was, that she became feverish, and was seized with a cough which was at first inflammatory, afterward purulent, and soon ended in death. During this last illness, she had no complaint in her bowels; and her stools were natural.

It may be expected that I should say something of that looseness, which came on towards the end of this child's cure. Fever is often nature's operation, and as it were the last effort when other anatomical motions do not succeed, in clearing the body of worms. In such a case, the uncommon heat obliges these vermin to seek their way out by a voluntary effort; or should they fail in this, they of course die and are dissolved into a shapeless mass resembling skins, mucus, or even matter. I believe that this was exactly the case with our patient: for the judicious reader will upon a review of that history

see

see that there was no time when an inflammation and its consequences could have happened, and that even the circumstances attending the looseness are not to be explained upon such a supposition. To those who look upon the purulent appearance of the stools as a conclusive argument to the contrary, it may be sufficient to observe, that no person hath as yet been able accurately to distinguish matter from mucus.

William Toplis and Mary Langly, both lodged in one little room. The fire was composed of every thing worthless that was combustible, which raised a most suffocating smoke, unless the door and windows were open to dispel it: so that by these means the unhappy children were either sweltered with a most suffocating heat, or exposed to accidents from cold. According to this situation of things, it is the more difficult to determine how far it was hurtful to them that they were never confined within doors. The boy was perversely allowed

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to

to go about in that manner, till through weakness he was hardly able to crawl. From that date, which is mentioned in the case, his cough mended fast, and was entirely gone in five days.

No doubt it will be observed, on the case of Mary Langly, that nothing remarkable was performed, since the cure was not completed in less time than a month. To this I answer, that for the first eight days no steady plan was pursued; as I was perpetually wavering between the influence of a name *, and the suggestions of my own reason and experience. This time therefore being justly left out of the computation, the cure was finished within three weeks. At any rate, what other medicine besides hemlock could have saved the life of so young an infant labouring under a most violent kinkcough, complicated with all the wretchedness consequent upon stupidity and extreme indigence?

* See Lond. Medical Observations, vol. 3. p. 406.

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The obstinacy, if not the fatality of Sarah Wadle's kinkcough might have been foretold from the violence of the disease itself; and also from its being complicated with abdominal infarctions, and a chronick looseness: a complication which becomes still more unfavourable upon the supposition that the kinkcough is an intestinal disease. It is necessary however to remark, that this patient's recovery was very considerably retarded by a cold smokey-house, and a diet, in general, very improper as to its quality.

From the whole it appears that hemlock hath never yet been unsuccessful in the kinkcough, nor ever been contraindicated through any of its complications. Can more be said in praise of any remedy for any disease whatever?

To conclude; the names of the patients and their places of abode are mentioned as often as it could be done with propriety, in order that all persons, willing to take the trouble, may satisfy themselves as to the truth of my narration.

CHAP. VI.

Of the cure of the kinkcough, both simple and complicated.

IN the preceding chapter, I have fully and fairly laid before the reader the whole of my experience relating to hemlock as a cure for the kinkcough. I shall now make the best use in my power of these observations, by adapting them not only to the simple kinkcough, but likewise to all its varieties arising from complication with other disorders; and shall treat this subject in the order that appears to me most natural, beginning with the simple disease.

I. Of simple kinkcough.

There is but one indication in this disease; namely, to give hemlock.

The true rule of giving this medicine is, to begin with a very small quantity diffused in a watery vehicle.

This

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This mixture is to be given by little and little, so as to be finished in twenty-four hours, or a natural day, and to be repeated daily.

A small addition of the hemlock mafs should be made to the mixture every day, or every other day, till symptoms of relief appear.

You are then to continue that dose so long as it seems to produce good effects.

When the medicine begins to lose it's effect, you are to proceed in augmenting the quantity a very little as before.

If any untoward, or contraindicating symptom comes on, you can either give the medicine in less quantity, or discontinue it for a time as may seem necessary.

To a child under six months, you may begin with half a grain of hemlock, dissolved in an ounce of spring water properly sweetened.

For a child from six months to two years old, the mixture may consist of one grain diffused in an ounce and a half of water.

For a patient from two to four years of age, two grains of hemlock in two ounces of water will be sufficient at first.

You may proceed in this manner, always allowing half a grain of hemlock in your first daily dose for every year of the patient's age till he is twenty.

After the patient is twenty years of age, you may always begin with ten grains of the hemlock mass for the first natural day's consumption.

It is not necessary to increase the vehicle of your medicine in the same proportion: it should be of such a quantity as not to be troublesome to swallow, while at the same time it sufficiently divides the medicine, so as not to feel thick in the mouth.

One ounce, and eight ounces of water being considered as the two extremes, there will be no difficulty in adjusting intermediate quantities to different ages, especially as no great accuracy is required.

Such patients as dislike a liquid medicine,

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cine, may have the hemlock in the form of powders, boluses, or pills.

If the patient has not two stools a-day, it will be proper to add a sufficient quantity of magnesia, or polychrest salt to the mixture.

Adults, for the same reason, may use senna tea, or polychrest salt, or fifteen or twenty grains of the aloerick pills.

As the stomach and bowels are very weak in this disease, it is evident, that the diet should be light and of easy digestion. Little or no animal food should be allowed. All fermented liquors are improper. The most suitable diet is small broths, milk, plain puddings, gruel, toast and water, and the like. If the patient is an infant on the breast, the nurse's milk is the best food, especially if it purges.

II. *The cure of the kinkcough with worms.*

From the instances given of this complication, in the preceding chapter, it is evident, that worms aggravate the

kinkcough. It also appears, that in general more stools are necessary in such a complication, than when the kinkcough is simple. Besides, there is reason to believe that hemlock will, in such cases, often supersede the use not only of laxatives, but of any other medicines whatever in the cure of both disorders. I therefore recommend the very same means for the cure of this complication, as for that of the simple kinkcough; only such patients should have two or three stools or more in the day, according as the urgency of the case may require.

III. *The cure of the kinkcough with a dysentery.*

About ten years ago I had such a case under my care. The patient was a young child. A great many medicines were used, as gentle vomits, laxatives, blisters, the peruvian bark, opiates, &c. This morbid complication notwithstanding continued obstinate; for no sooner was one disease relieved than the other became worse

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worse in proportion. At last, finding the expectoration free, and the stools of a pretty natural appearance, I was determined to trust entirely to opiates for a cure, especially as the patient's strength was very much exhausted. Accordingly, I ordered a large dose of syrup of white poppies, which procured him several hours sound sleep, and he awaked free from both diseases. He recovered his strength however very slowly; for he was pale, weak, spiritless, and had a quick pulse for near two years after. He is now a strong healthy youth.

Opium certainly saved this child's life: but hemlock seems to be a much better medicine in such a case. I have already endeavoured to explain how it acts in the kinkeough. On the same accounts it must be useful in the dysentery. By its antispasmodick quality it will remove intestinal strictures, and so unload clotty feculent accumulations, which, by lurking in the guts, often aggravate and protract the disease. Besides, as a sedative
and

and a healer it will be of great service in the dysentery.

Whatever be in this reasoning, there is ground to expect the greatest benefit from hemlock in the dysentery; as we have seen it so efficacious in some of the preceding cases for a diarrhæa, that it was necessary to employ laxatives to obviate the bad effects of too sudden a stoppage. Hemlock therefore promises of itself to answer in most cases, every intention in every stage of the morbid complication of which we are speaking, and may be used according to the rules laid down under simple kinkcough.

IV. *The cure of the kinkcough with dentition.*

We have found that hemlock is a cure for this variety of the kinkcough, when given according to the rules so often mentioned.

When the symptoms of both diseases are urgent, notwithstanding the use of this medicine, the gum should be cut where the tooth presents itself, whether

it

it appears to be near the surface or not. Many physicians advise against making these incisions, unless the tooth be on the point of cutting through the gum: because, say they, when the tooth is not sufficiently advanced the wound heals before it hath made its way, and consequently a greater resistance is made than before to the protruding tooth, on account of the necessary callosity. But this objection is of no weight when we consider, that such trifling incisions may be repeated, without inconvenience, as often as necessary, till the tooth has thoroughly made its way.

There is another objection to these early incisions more deserving of our attention. It is this: the enamel, not having yet acquired its proper hardness, is injured by the knife, and consequently the tooth becomes diseased. This is the case with my fifth patient: for the teeth that were cut upon are discoloured, and their edges resemble so many crescents with the points turned upwards. It is to be feared

feared that the next succession will not be sounder; as nothing is more common than to see carious teeth communicate their taint to the inferior protruding ones; but perhaps this bad consequence may be prevented by extracting the diseased teeth some time before they show a tendency to shed.

Unless in cases of danger therefore it is improper to lance the gum, so as to reach the teeth with your knife, except they are very near the surface: and deep incisions are the less necessary, as I have seen superficial ones made upon the swelled part of the gum, where I was sure that no tooth could be touched, not only prevent convulsions but even remove them in a moment.

V. The cure of the kinkcough with an ague.

Sir John Floyer once cured this complication by the peruvian bark after general evacuations: but this method I believe will not always answer. The seventeenth case is a strong instance of the

efficacy of hemlock for both diseases: the treatment there differs little from the method recommended for the simple kinkcough. It does not appear that the bark was more efficacious than hemlock as a febrifuge; at least in that external method of applying it, and I am sure it never could have been given internally.

VI. *The cure of the kinkcough with the small-pox.*

I know from experience that hemlock may be given in the small pox not only with safety but advantage. Having been called to two poor children in the very beginning of the eruptive fever of this disease, the one a boy aged five, the other a girl aged nine years, and both of healthy habits, I thought proper to order hemlock in the form of a mixture for each, their bowels having been first emptied with fenna tea; and the small-pox turned out a very distinct and good sort. I would not have it thought that this was a random experiment. Doctor
Storck

Storck had asserted, and I had often found by experience, that hemlock taken internally neither cools nor heats; and that it promotes a kindly suppuration in sores, even after the peruvian bark hath failed. It was therefore reasonable to expect the same good effects from hemlock in the smallpox. Add to this, that the poverty of the patients not permitting the use of the bark, and the certainty of the small-pox being sometimes complicated with a disease that was become particularly the object of my consideration, not only authorized, but rendered the above trials highly necessary: and it is with pleasure that I can draw this conclusion from them, that hemlock may be given in such a combination, not only with great safety but with equal advantage.

However I have since had reason to believe that this variety of the kinkcough is not so dangerous as hath been commonly apprehended: for a surgeon of some experience in inoculation assures me,

me, that he is so far from declining that operation on account of the kinkcough, that it is rather a fresh inducement with him to perform it upon such patients by way of a cure. He showed me three children that he had inoculated while they were labouring under the kinkcough; one of them was entirely freed from his disorder by the eruptive fever; and the other two were so much relieved by the same, that though the kinkcough continued after the small pox was gone, yet it was in such a slight degree as to merit no regard. I hear some other inoculators follow the same practice, and that they were led to it by observing that the kinkcough was either much relieved or entirely cured by the natural small pox.

VII. *The cure of the kinkcough with the measles.*

Though I have seen the disease, yet I never treated it. This is indeed a most dangerous complication: for I am well informed that it proved fatal to many children in and about Loughborough
last

last year. Hemlock, bleeding, blisters, saline medicines, laxatives, and diluents are the cure.

In this and all other combinations of the kinkcough with feverish disorders we are first to attend to the most urgent disease, which no doubt is the fever; and we need only aim at palliating the kinkcough, so as to render the progress and termination of the other disease favourable; especially when it may be judged improper to go such lengths with the hemlock as would be necessary to effect a complete cure soon: but I believe such cases will scarcely ever happen unless from idiosyncrasy.

VIII. *The cure of the kinkcough during pregnancy.*

Though pregnancy is no disease, yet it occasions peculiar symptoms in the kinkcough, and renders it dangerous. This therefore must be looked upon as a morbid variety that claims particular attention:

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tention: and it is a pleasure to find that the method of cure recommended for the simple kinkcough is equally successful here.

I.

A 8 hemlock hath not disagreed with any one of the foregoing patients, we may conclude that it will very seldom be contraindicated in the kinkcough, through what is called idiosyncrasy, or peculiarity of temperament.

II.

This medicine cures the kinkcough even in the last month of pregnancy, and in the first months of infancy; and is absolutely safe both for mother and child.

III.

Hemlock is so far from occasioning spasms in children, that it is a certain **CHARACTERS** of spasmodic asthma, which has

C H A P. VII.

Corollaries.

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This medicine cures the kinkcough even in the last month of pregnancy, and in the first months of infancy; and is absolutely safe both for mother and child.

III.

Hemlock is so far from occasioning spasms in children, that it is a certain cure for a spasmodick disease, which hath

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hitherto resisted all other medicines. Besides, it certainly prevented spasms, and probably fatal convulsions, in the child, case fifth; notwithstanding a constitutional tendency, a rapid dentition, and an obstinate kinkcough, all conspired to bring them on.

IV.

It is a good medicine in dentition.

V.

It cures the symptoms attending the round worms, and even expels these vermin.

VI.

It takes off fever in some instances.

VII.

It stops immoderate excretions.

VIII.

It sometimes promotes sweat.

N 2

IX.

IX.

It frequently keeps the body open,
and sometimes even purges.

X.

It often does not sensibly affect any
secretion or excretion.

XI.

It immediately procures better nights
in the kinkcough.

XII.

It immediately abates the vomiting,
and generally carries it off in a few days.

XIII.

The phlegm is daily diminished during
the use of this medicine; for less and
less is thrown up while the vomiting con-
tinues.

XIV.

The kink daily abates in force and
frequency, and is generally removed
together

THE KINKCOUGH. 181

together with all its concomitant symptoms, except a slight cough, in the space of a week: and this is often the case even in some instances of complication with other diseases, as dentition, or worms.

XV.

Thus hemlock is a specifick in the kinkcough according to the most proper interpretation of that word; for it acts on all the symptoms at once, or rather on the proximate cause: and so by diminishing the irritation, all the symptoms must of course diminish in the same proportion, till at length they are entirely removed, that is, till the disease is cured.

XVI.

Hemlock is not only a successful and expeditious cure for the kinkcough, but it is a medicine that can always be administered; for we cannot suppose an instance where the most froward child

will refuse it, as it can be disguised in so many shapes, on account of the smallness of the quantity requisite, as well as the mildness of its sensible qualities.

XVII.

Finally, hemlock cures the kinkcough safely, certainly, expeditiously, and pleasantly: which are all the requisites of the most desirable and complete cure.

APPENDIX.

A Description of HEMLOCK and its Preparations.

THOUGH, with many other practitioners, I can say that hemlock is not an infallible remedy for cancerous or scrofulous tumours and sores; yet the world, in my opinion, is greatly indebted to doctor Störck for recommending it, not only in those cases where it is generally useful and often effects a cure; but also in many other disorders. It is much to be regretted that he should have met with so much opposition to this benevolent design. I term it opposition; since all who have differed from that learned gentleman cannot lay claim to candour. For example, they are surely very blameable who, absolutely and without trial, condemn the use of hemlock on account of its supposed poisonous nature.

Is not opium a rank poison? and yet the materia medica would be very lame without it. So true is this maxim, *medicamenta a venenis non natura sed dosis distinguunt* *. And equally unfair is that inference which some have made, that, because hemlock failed with them in the cure of cancers, it was of course good for nothing: since, during the progress of such trials, they ought at least to have observed effects from it, sufficient to point out its utility, in some other disorders incident to the human body. But I pass over these and other similar arguments, against the use of hemlock as a medicine, being conscious that they will avail little. For my part, I have long and attentively observed its effects, both as an external and internal medicine, and have had more and more reason to look upon it, as a valuable acquisition to the materia medica. There are two circumstances however that well deserve notice, as they prove a greater bar to the medical reputation of hemlock,

* Linnæi Materia Medica. Canon. 17.

than all that hath been said or written against it: And they are these.

First, as there is no tolerable description of the plant in any botanical book commonly met with, others of the umbelliferous class have very often been mistaken for it.

Secondly, no precise method hath yet been published for making the preparations of hemlock, particularly the extract. For this reason, I believe, almost every person makes it in a different manner. Nay more, I may be bold to say, that very few make it twice in the same manner. I am led to think so, because I never saw so much variety in any one medicine. Sometimes it hath been black, and so empyreumatical that you could not possibly distinguish any odour of the plant. Sometimes it hath been of a greasy light green colour with scarce any smell, and that not resembling hemlock. At other times it hath been observed of a yellowish brown colour with a rank strong smell. It hath as often been got without

as with powder. If it hath sometimes been procured of a proper consistence for pills, it hath much oftener been too hard, or too soft for such a form. And very frequently it hath been covered with mould * and overrun with mites †.

In order to obviate the above-mentioned abuses, my design is to give a botanical description of hemlock; and also some account of its more usual preparations, as well for external as internal use; and in particular to lay down an approved method of making the extract, or what may more properly be called, according to my form, a mass of pills. But as it hath been very lately asserted, and by a competent judge, that the *cicuta major*, or hemlock which grows in this country, is not the plant used at Vienna; I must here remark that this is the only species of the genus, according to the Linnæan system, yet known to grow wild in Europe. Mr. Philip Miller in-

* *Mucor mucedo*. Linn. Fl. Suec. 1284.

† *Acaras Siro*. Linn. Fn. Suec. 1975.

deed makes another species; viz. *cicuta major foliis tenuioribus* C. B. P. * But Bauhine himself, considers this only as a variety of the *cicuta major* †: which opinion is adopted by Sir Charles Linnaeus. Beside, as will appear below in the synonymes, Doctor Haller, and also Doctor Crantz of Vienna who superintended the delineation of the plant published by Doctor Störck ‡, agree that it is the common hemlock. Add to all this, that, Doctor Störck having sent a specimen of the leaves of this plant to Mr. Hudson, both Dr. Watson and he are thoroughly satisfied, that it is our indigenous hemlock.

I now proceed to the synonymes, and description of hemlock §.

Conii maculati Synonyma.

Conium pedunculis angulatis nudis trichotomis, receptaculis umbelliferis nudis.

* Gardener's Dictionary. † Pinax Theatri Botanici, p. 160. ‡ Supplementum de cicuta.

§ Philosophical Transactions.

Conium

Conium feminibus striatis. Linn. Fl. Succ. 238. Sp. pl. 349. Hudson. Fl. Angl. 100. Gouan. Fl. Mon. 286. P. Miller, G. Dict.

Cicuta. Turner. Herbal. P. i. 140. Pen. et Lobel. Stirp. Adv. 326. Ger. emac. 1061. Merrett. Pin. Brit. 26. Morison. Hort. Bles. 52. Sutherland. Hort. Edinb. 84. Raii Hist. Pl. 451. Synop. 215. Haller. Hist. Helv. vol. 1. 337. Lewis. Mater. Med. 210.

Cicuta major. C. B. P. 160. Morison. Hist. Pl. vol. 3. 290. Sibbald. Scot. ill. P. 2. L. 1. 17. Wallace acc. of Orkney 20. Alston Ind. pl. 41.

Cicuta vulgaris. Phyt. Brit. 27. Hill. Brit. Herb. 411.

Cicuta major vulgaris. Parkinson. Theatr. Bot. 932.

Cicuta major vulgaris maculata fastens. Störck. L. de cicut.

Cicuta officinarum. Dale Pharm. 126. J. Miller. Bot. Offic. 138. Alston. Mat. Med. vol. 2. 113.

Cicuta

Cicuta officinarum et *Störckii*. Crantz

Class. Umbell. 98. Haller. l. c.

B. Conium seminibus striatis foliolis tenuioribus. P. Miller Gard. Dict.

Britannis, Hemlock.

Conii maculati descriptio.

RADIX biennis, fusiformis, ramosa, perpendicularis, sublutem.

CAULIS unicus, fistulosus, tripedalis, novempedalis et ultra, erectus, articulatus, obsolete trigonus, nudus, striatus, nitidus, late viridis, maculis et punctis purpureis, saepe scabriusculis, dense satis aspersus.

RAMI structura caulis, subpatentes, ex foliorum alis ad genicula orti, prope radicem conferti, superiores alterni.

FOLIA ramorum situ et numero, petiolata, tripinnata, vel quadripinnata, cum impari, pinnis oppositis, foliolis lanceolatis, pinnatifidis, venosis, nudis, nitidis, firmulis, supra saturate, subtus pallide, viridibus, laciniis ferratis alternis. **Floralia** opposita, simpliciter pinnata cum impari,

pari, pinnis oppositis, foliolis ut in reliquis.

PETIOLI subtrigoni, fistulosi, leviter maculati, nudi, nitidi, canaliculati, striati, ad basin dilatati, fulcati, marginibus membranaceis, appendiculatis, aucti, amplexicaules, ramos fere vaginantes. Pro petiolis superioribus, tantum basis hæc membranacea appendiculata. *Partiales*, fistulosi, angulati, canaliculati, nudi, nitidi. Canaliculo inter singulum pinnorum par papillæ glandulosæ plures. Pinnarum alæ, membranulâ primo hyalinâ post purpurascente, ornantur.

UMBELLÆ terminales, ex universalibus & partialibus compositæ. Pedunculi angulati, nudi, nitidi, trichotomi, subpatentes. Receptacula umbellarum nuda.

UMBELLA *universalis* e radiis 10—20, inæqualibus patentibus. *Partialis* consimilis, sed radiis numerosioribus.

INVOLUCRUM *universale* brevissimum, nudum, foliolis subquinque, lanceolatis, inæqualibus,

inæqualibus, reflexis *partiale* monophyl-
lum, nudum, breve, tripartitum, patens,
externe situm.

PERIANTHIUM *proprium*, margo cre-
nata.

COROLLA *universalis* uniformis.

Propria, Petalis quinque, inæqualibus,
obcordatis, inflexis, intus carinatis.

STAMINA. *Filamenta* quinque, subulata,
inæqualia, patentia, petalis longiora. *An-
theræ* subrotundæ.

PISTILLUM. *Germen* inferum. *Styli*
duo reflexi. *Stigmata* obtusa.

PERICARPIUM nullum. *Fructus* sub-
compressus, cordatus, dentato-costatus,
bipartibilis.

SEMINA duo, hinc convexa, femiovata,
costis quinque, subdentatis, inde plana.

OBS. Radix interne alba, cellulis de
super excavata. Quoad altitudinem, mul-
tum variat hæc herba; nimirum, a qua-
tuor unciiis usque ad pedes novem et ultra,
ascendens.—Flores explicat a medio ju-
nio: neque prorsus deflorescit ante calen-
das januarias.—Semina matura, fertilia,
pergunt

pergunt decidere, ab exeunte angusto ad subsequenter æstatem.

Herba, primum annum, acaulis, radice solida alba; foliis tripinnatis, vel quadripinnatis, nudis, nitidis; petiolis longissimis, nudis, nitidis, leviter maculatis.

Ex herbis vulgarioribus, in Britannia, est conium maculatum. Crescit, imprimis, ad sepes, fossas, et vias: nec non, in ipsis pagorum viis, et hortulis.

Odor totius plantæ virosus. Sapor subdulcis subacris.

Of the preparations of hemlock.

We now come to the preparations of this celebrated herb. These may be divided into internal and external. I shall treat of each in their order; and first,

Of the powder of hemlock.

This preparation of hemlock hath hitherto been chiefly prescribed for internal use at Edinburgh. Doctors Cullen and Gregory both told me, when in Scotland

land last year *, that as much caution is necessary in ascertaining the dose of every fresh powder as if it were a chemical preparation; and that very alarming symptoms have arisen from inadvertency in that respect. It is not easy to assign a reason for this singularity: perhaps some parts of the plant may be more virulent than others; the gathering it at different times of the year, or at different ages, may probably also occasion a difference; and perhaps all parcels of the herb, collected for powdering, may not have been freed from impurities with equal care. But, most probably, this diversity of strength in the different preparations depends, in a great measure, on the different degrees of heat employed in drying the herb, previously to its being powdered. I know, that if hemlock is dried in the shade according to the common rule, it will lose much of its colour and smell. The fresh herb

* This was written in the year 1772.

O —

bruised

bruised turns yellow in a few hours. The expressed juice becomes yellow, and throws up bubbles, in much the same time. Hemlock therefore shows a strong disposition to ferment. In order to prevent this fermentation, and, consequently, to preserve the virtues intire, the herb, when intended for powder, should be dried by a pretty brisk heat. Hence it is probable, that intermediate degrees of heat will produce powder of proportional efficacy. Hence seems to arise the necessary caution with regard to every fresh preparation. Hence a proper standard for making both powder and extract seems equally wanted. I commonly direct the powder to be made as follows.

Take any quantity of the leaves, foot-stalks; and tender parts of the stems and branches of hemlock, about the time that the first flowers are beginning to open; spread it upon a hearth before a good fire, in a room where in particular dogs or cats have no access; and place a deep fender, or some such contrivance, immediately

immediately behind the herb, in order to hasten the process of drying. When the herb is sufficiently friable, reduce it to a very fine powder. This, when preserved in phials well stopp'd, will retain its efficacy for many months.

We now come to the method of making the pills. They are compounded of the powder and expressed juice evaporated to a certain consistence. This inspissated juice, usually called extract, may still retain the name: but it is to be observed, that I employ it only as an ingredient for the mass of pills. I prefer this form, not only as it keeps better, but also as it probably hath the virtues of the herb in greatest perfection. A sufficient quantity of powder should be in readiness previous to making the extract; the process of which is as under.

Extract of hemlock.

When you are about to make this extract, the plant must be gathered over night; so that, by beginning very early

next morning, the several processes of incision, contusion, expression, and evaporation, may be finished in one day, for the reason already assigned.

The plant may be gathered wherever it is found healthy and rank: though those places seem preferable, where it naturally affects to grow.

The best age for cutting hemlock, in order to make extract, is that mentioned above; as then the herb is in full verdure, hath suffered little or nothing from the depredations of insects, and its odour is manifestly strongest.

Every part of the herb, except the root, and what may happen to be decayed, should be taken.

The subject, thus collected, is to be cut down, and bruised exceedingly well in a wooden or marble mortar, and then put into hair bags, for expression, by five or six pounds at a time.

During the expression, the first juice is opaque, deeply green, and discovers little odour. But by degrees it becomes lighter

in

in colour, till what runs last is of a pale yellowish green, and is diaphanous. And all along it seems to gain in smell, what it loses in colour.

As this is the case, the matter should be drained of its juice as much as can be; since probably what comes last possesses in greatest degree the medical qualities of the herb.

For this purpose, frequently altering the position of the bag in the press is recommended, that no part of the herb may elude the utmost efforts of pressure: and this process should be continued till the drops fall very slowly, and the mass when taken out of the bag appears quite dry.

This expressed juice all along deposes, in part, a yellowish sediment: but the whole is to be used without depuration.

To save time, as soon as you have got a sufficient quantity of juice to fill your vessel, you may proceed to evaporation; gradually adding more as you get it ready,

and as the vessel can hold it, till you shall have put in the whole,

The properest vessel for the process of evaporation is a broad glazed platter. This is to be put over a fire of charcoal in a fire pan,

Before the juice becomes very hot it will run into clots, the green part forming the clots which swim in a brownish liquor.

As soon as these clots are formed you should begin to stir the liquor frequently with a bit of hemlock-stalk; and keep up just such a heat as makes them move about, without driving them above the surface, or occasioning any ebullition.

Proceed in this manner till the intestine motion ceases from the matter having acquired more consistence; and then it will be necessary to stir it constantly from the bottom; the rule for the degree of heat now is what raises a steam without bubbling or noise.

Go on thus, till, upon spreading the stuff to an equal thickness over the platter
whilst

whilst upon the fire, you can, with a spoon, scrape away any portion from the bottom, while no effort is made by the contiguous mass to fill up the vacuity.

You then have got extract of a sufficient consistence, as an ingredient for your mass of pills. Six pints of juice generally yield one pound of this extract.

Hemlock-pills.

Take of extract of hemlock, as above, any quantity; powder of hemlock, one fifth part: mix them without addition.

This mass is of a dark green colour, and retains the odour of the fresh plant. The quantity of powder here specified makes the extract of a proper consistence for pills; especially after it hath been kept for a few days, to allow the powder time to absorb the watery part of the mass. And this proportion is the more eligible, that a quantity of hemlock, of the age above mentioned, lost, by drying, exactly four fifths of its weight. Therefore, this mass, prepared

with so gentle a heat, and containing the same proportion of solid matter as the herb, may be allowed to possess the medical virtues of hemlock without diminution.

The mass of pills, thus prepared, should be put up in stone pots capable of containing about a pound weight each; and covered with some folds of paper closely tied down. In this manner I have kept it above two years, of a good consistence, and without discovering any tendency to corrupt. I mean however such pots as are made in Staffordshire, and other parts of Britain; for the ware that is imported from Holland, under the name of delfe, will not preserve your composition if it was ever so well prepared.

Though the solid form be the most commodious for internal use; yet, as many cannot swallow pills, or boluses, the same mass may be given in a mixture as under.

Hemlock

Hemlock mixture.

Take of spring water, eight ounces; proof spirit, white sugar, each half an ounce; mass of hemlock-pills, from eight grains to eighty or more: mix them.

This is a very smooth mixture; for the powder, being very fine, is not at all perceived. It ought to be made fresh every day. This mixture may be given by spoonfuls; or may be divided into draughts, when greater accuracy is required.

The expressed juice can never be used conveniently, for the reason so often given.

An infusion of the fresh herb may be tried. I never prescribed it but once, and found it too flatulent.

Next follow the external preparations of hemlock.

Plaster of hemlock with gum ammoniac.

This plaster hath been long famous. Heurnius * seems to have been the first

* Opera Omnia, Tom. I. p. 182.

inventor

inventor of it: but it hath undergone many changes since his time. In most books the form is very complex; though in some sufficiently simple; but, in all that I have seen, little can be expected from the proportion of hemlock that enters the composition. For this reason I consider the following as some improvement.

Take of gum ammoniac, eight ounces; common vinegar, an english pint: rub them together in a marble mortar (or stir them in a proper vessel over a slow fire) till the gum is dissolved; then incorporate the strained solution with four ounces of the mass of hemlock-pills; and afterwards evaporate the subject, over a very gentle heat, to the consistence of a plaster.

This plaster is of a beautiful green colour; and of a good consistence, being sufficiently pliable to the skin, and properly adhesive. The vinegar of squills is rejected, as having been found too sharp in some cases. Indeed I could willingly have used water only; but vinegar

negar is retained, as having been often employed, from a supposition that it improves the virtue of the plaster.

Ointment of hemlock,

Unctuous substances seem, in general, a very improper medium for conveying the virtues of medicines to an animal body, either externally or internally. Beside, I very much doubt whether such substances can be sufficiently impregnated with a recent vegetable juice; at least before that juice hath undergone such a heat as shall greatly weaken its nature. For these reasons I prefer the following form; and can vouch for its propriety in every intention as an ointment of hemlock.

Take of the mass of hemlock-pills, and honey, each equal parts: mix them without heat.

By varying the proportions of this composition, a *cerate*, or *liniment*, can be procured: and a suitable addition of water

water will give rise to other forms, as lotions, gargles, &c.

Poultice of Hemlock.

Take of powder of hemlock, two parts; oatmeal, one part; spring water, a sufficient quantity: let them simmer together to a proper consistence; and, when removed from the fire, add a twelfth part of honey.

Or:

Bruise any quantity of the fresh leaves of hemlock, with a twelfth part of honey, and as much oatmeal as will be sufficient to make a poultice without heat.

Fomentation of hemlock.

Take of the fresh herb bruised, eight ounces; or, hastily dried, three ounces; boil it for five minutes in an english gallon of water: strain the liquor when cold; and then make it sufficiently hot for use.

I have

I have now finished what I had to say on the preparations of hemlock; for, as to a distilled water, infused or decocted oil, syrup, or conserve, I should be loth to add to the list of forms already too numerous; and which seem at first to have arisen chiefly from a spirit of refinement. I shall conclude with pointing out to the unskilful in botany such characteristick marks of hemlock as sufficiently distinguish it from every other plant of the same class.

All umbelliferous plants are vulgarly called kexes in this country. Whenever, therefore, the herb-gatherer meets with a wild kex, whose fruit or seeds are covered with ridges, and those ridges are indented like a saw, he may reckon for certain that such a plant is the common hemlock.—But, as this herb is recommended to be gathered before the fruit is formed, he may attend to the following characters which I have employed for a specific name.

The uppermost parts of the stem and branches of hemlock divide, and subdivide, into threes; each triple division having a common base. Beside, those divisions and subdivisions are angular, smooth, and free from hairs, or down. And it must be particularly remarked, that the very points of the divisions which support the umbells, are also bare, that is, free from all downy or hairy covering.——This plant, so specified, is always of a bright green; hath its stem and branches, in particular, speckled with purple; is bare; is all over with very little exception smooth to the touch; and hath a rank disagreeable smell.

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33,	18, 19,	free of	free from
38,	9,	to return	to come
49,	14,	rife	rife
55,	17,	occasional	occasional cause
57,	1,	before	but before
63,	7,	this	his
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186,	2, note,	this	his
187,	13,	hemlock.	hemlock §.
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189,	8,	nitidi, canalifculati,	nitidi, canaliculati,
190,	4,	reflexis	reflexis ;
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4	14	occasional	occasional
5	17	but before	but before
6	7	this	this
7	11	accents	accents
8	2	this	this
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